

The Open Court

A MONTHLY MAGAZINE

Devoted to the Science of Religion, the Religion of Science, and the
Extension of the Religious Parliament Idea

Editor: DR. PAUL CARUS.
Assistant Editor: T. J. McCORMACK.

Associates: { E. C. HEGELER.
MARY CARUS.

VOL. XIV. (NO. 6)

JUNE, 1900.

NO. 529

CONTENTS:

<i>Frontispiece.</i> AUGUSTE COMTE.	
<i>The Tomb of Vibia.</i> An Important Monument of Dionysian Mysteries. Illustrated. DR. ERNEST MAAS, Professor of Classical Philology in the University of Marburg	321
<i>The Old and the New Magic.</i> Illustrated. EDITOR	333
<i>The Concept.</i> DR. ERNST MACH, Professor of the History and Theory of Inductive Science in the University of Vienna	348
<i>Rhyme and Rhythm in the Koran.</i> DANIEL J. RANKIN	355
<i>Gospel Parallels from Páli Texts.</i> Third Series. <i>Psychical Powers.</i> Trans- lated from the Original by ALBERT J. EDMUNDS	358
<i>A New Work on Comte</i>	364
<i>Correspondence on China by a Chinaman</i>	365
<i>Zarathushtra.</i> Illustrated	366
<i>The Home of God.</i> A Poem. PIERCE C. FREETH	370
<i>In Ghostly Japan.</i> With Illustration	372
<i>An Ancient Sarcophagus.</i> A Poem. FLORENCE PEORIA BONNEY	375
<i>Scientia</i>	375
<i>International Primer-Cyclopædia</i>	376
<i>French Science and Philosophy</i>	377
<i>The Old South Work</i>	380
<i>The Assyrian Monuments and the Sermons of Isaiah</i>	381
<i>Book Reviews and Notes</i>	382

CHICAGO

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AUGUSTE COMTE.

French Philosopher

(1798-1857.)

Frontispiece to *The Open Court*, June, 1900. Courtesy of the *Société Positiviste*, Paris.

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THE TOMB OF VIBIA.¹

AN IMPORTANT MONUMENT OF DIONYSIAN MYSTERIES.

BY DR. ERNST MAAS.

Professor of Classical Philology at the University of Marburg.

THE triumph of the Orphic religion, which promised a better Beyond, began in the Hellenic world with the ascendancy of the Eastern Greek and Ionian culture. The once pious belief in the ancient gods had decreased among the people and had vanished, for the greater part, among the educated. The condition of the Ionians in the sixth century was desperate. The nations of the East tottered, kingdoms perished; nowhere was any secure footing, nowhere salvation for this life. Besides, their freedom was gone. Passionately seeking peace for their tortured souls, they clung to the Orphic promises for the future.²

But many surrendered themselves to the joys of this world, to the measureless voluptuousness that is engendered by pessimism; and indeed the earliest vestiges of a materialistic conception of life among the Greeks point to Ionia. This remarkable aberration of the Greeks as a people has been ignored or underrated by the historians of Greek ethics and philosophy, because it manifested itself rather in practical life than in theories. As the monument which I

¹ Translated from Ernst Maas's *Orpheus*.

² The oldest and for this reason important testimony for the spreading of the Orphics over the region of Ionian culture is given by Xenophanes of Colophon (about 538 B. C.) in the Scholia to Aristophanes' *Knights*, v. 408: "They called 'Bacchus' not only Dionysus, but they called 'bacchi' all those who performed the orgiastic rites, yea even the branches carried by the initiated." Thus Xenophanes in his "Silli" records that "pine-trees stand there densely around the house." (Codex Venet.: "a pine-tree"; Lobeck I., p. 308A: the bacchi of pine-trees densely around the house; Wachsmuth, *Sillographi*, 2. edit., p. 188: the "bacchi" of pine-tree.) Surely the expression "bacchi" (*βάκχοι*) refers to Dionysian mysteries; undoubtedly not to branches carried in the hand or placed around the head, but to branches which used to be placed around or before the house.

propose to discuss is related not only to the Orphic religion but also to that hedonistic materialism, the entire matter must be explained briefly. The tomb is by some accident situated in the vicinity of the Christian catacombs without being connected with them; but this is no argument for the assumption which is sometimes made that it is Christian.

The head priest of Sabazius¹ and other gods, a certain Vincentius, had erected in Rome a family sepulchre for himself and his wife Vibia. The inscription reads: "Vincenti hoc (ostium) quætes quot vides; plures me antecesserunt, omnes exspecto. Manduca bibe lude et veni at me; cum vives, benefac; hoc tecum feres."

"Numinis antistes Sabazis Vincentius hic est,
qui sacra sancta deum mente pia coluit."

[“This is the entrance (which [*quod*] thou seest) of the rest (*quietis*) of Vincentius. Several have preceded me, all I expect. Eat, drink, frolic, and come unto me. As long as thou livest thou shalt act righteously (*benefac*): this thou wilt take with thee.

“This is Vincentius, head priest of the god Sabazius,² who revered with pious mind the sacred rites of the gods.”]

Vincentius' maxim of life expressed in the inscription of the tomb, reads: "Eat, drink, frolic and come to me. As long as thou livest, thou shalt act righteously: this thou wilt take with thee." The dead is introduced saying: Who shall come to him into Elysium after a life full of material joys? The individual behest appears not to be directed to any definite person. Elsewhere, indeed, it is not the reader of the inscription, but the survivor, who addresses the departed: "I pray, prepare unto me an hospitable dwelling there," and from the grave comes the answer: "Come unto me; everything is prepared;" but there it is the inquirer that is indicated. It seems that in the case in hand the addressed are not the priests of the mystic rites of Sabazius, but any reader whatsoever of the inscription.

The dead exhorts: eat, drink, frolic. Parallel to this, though differing widely, is an old passage which even the first editor of the inscription has remembered. It is the so-called inscription on the tomb of Sardanapalus, a monument which existed solely in the imagination not of the Assyrians but of the Eastern Greeks and about which, although it is only the expression of an idea, there has been much discussion.

¹ Sabazios is one of the names of Dionysus, or Bacchus.

²The form "Sabazis" is shortened from Sabazius; so we find "Sabos" in Hymn. Orph. XLIX., verse 2, etc.

According to Aristobulus,¹ this is the original of the maxim of Vincentius: *σὺ δέ, ὦ ξένη, ἔσθιε καὶ πίνε καὶ παίξε, ὡς τᾶλλα τὰ ἀνθρώπινα ἀνὰ ὄντα τούτου ἄξια* (meaning the gesture of ἀποκροτεῖν) "O stranger, eat, drink and frolic, since nothing else in human life is worth 'this' [i. e., a snap of the finger.]"

Here are some parallel passages which express the same sentiment :

Ion of Chios addresses (Athenaeus X. 477D = *Fragm. 1*) Dionysus :

*χαῖρε· δίδου δ' αἰῶνα, καλῶν ἐπιήρανε ἔργων,
πίνειν καὶ παίξειν καὶ τὰ δίκαια φρονεῖν :*

[“Be greeted ! grant long space of life, furthering noble deeds, to drink and to sport and to mind just things.”]

The second line we find in more ancient, probably sacred, poetry ; this becomes evident from Empedocles, v. 415 f.

*ἦν δέ τις ἐν κείνοισιν ἀνὴρ περιώσια εἰδώς
παντοίων τε μάλιστα σοφῶν ἐπιήρανος ἔργων·*

[“But among them there was a man of immense knowledge (knowing immense matters) and furthering (accomplishing) manifold very wise deeds.”]

In Ion fr. 2. (Athenaeus X. 463. B. v. 7 f.) the admonition is repeated :

*πίνωμεν, παίζωμεν, ἴτω διὰ νυκτὸς αἰοιδή,
ὀρχείσθω τις· ἐκὼν δ' ἄρχε φικοφροσύνης·*

[“Let us drink, frolic, let song resound all night long, let some one dance ; willingly (gladly) begin (to indulge in) gaiety.”]

But even this was not the original of the inscription on the tomb of Sardanapalus ; the original inscription was by no means harmless, but monstrously materialistic. It read : “Eat, drink, indulge in love, for nothing else is even worthy of contempt.” The frivolity contained in these words appeared to be too strong in the eyes perhaps of many contemporaries and undoubtedly of later generations. By changing the third of these commandments the materialistic character of the maxim was preserved and adapted to feebler spirits. This modified form of the maxim of the debauchee of the Greek legend which has preserved but very little of the historical King of the Assyrians was also extant.

The Assyrian Asurbanipal was fated to become the carrier of that moral—or immoral—ideal which the inclination and desire of the Greeks in Asia Minor needed then for their own practical life.

¹*Apud Strab. XIV., p. 672; Athen. XII., p. 530A; Arrian Hist. Alex. II., 5, 4.*

“How long will you revel?” an old Ionic poet warned his fellow-countrymen in time of danger. And who is not impressed by Herodotus’ description of the Ionic catastrophe, as if there was a host of little imitators of Sardanapalus who indulged to the last moment, even upon the ruins of their sinking homes, in sensual vices without stirring a finger for freedom.

“They have learned their follies (*ἀφροσύναι*) from the Lydians,” Xenophanes rebuked them (fragm. 3); and Ninus was considered in early periods the very type of a “city of folly.”

The beginning of the fatalistic conceptions date back to the time of Homer; the serene world depicted in the epos of Homer keeps aloof intentionally each disquieting thought of death and the hereafter in order that it may enjoy with undiminished vigor the present. Akin to this hedonistic time is, at least in some features, the Augustinian epoch; still more akin to it is the time of the Italian Renaissance which has taken such an important part in creating the ideas and sentiments of our days.

For a procession with Dionysus and Ariadne the following verses, typical of his age, were composed by Lorenzo the Magnificent: “How beautiful is youth that flies everywhere; who wants to be merry, let him be merry: there is no certainty about the day to come.”

As in that epoch of modern history, so during the time of the downfall of the Ionian Cities man freed himself from the restrictions of patriotism, of religion and of the ancient customs; this came about not through any fault of his, but rather through historical necessity. And as the element of individual culture was handed on by the Italians to the other nations of the Occident, so it has been given over before, in the fifth century B. C. by Ionia to the West, especially to Athens.

Only the beginnings of this development are defined in the Homeric view, and only in the chaos of perishing Ionia, within the sphere of Ionic licentiousness, could the prototype of Sardanapalus-Asurbanipal (like Hercules in subjection to Omphale) have been created in the form of fiction besides many other clearly defined types, especially Croesus. Similarly in certain Arabic tales a prince satiated by all enjoyments seeks recovery from his surfeit and his melancholy, but the fable here takes a somewhat different turn.

J. Burckhardt, in his classical work: *Die Kultur der Renaissance*, 4. edit. II., p. 240 ff. says:

“Somewhere the poetry of the Renaissance had to depict the wild egotism which had become insensible to dogmatism

Now Pulci draws the figure of the giant Margutte who, in the face of every religion, unreservedly professes the most hedonistic egotism and all vices and who claims but one virtue: that he had never committed any treason Margutte belongs necessarily to the poetry of the world imaged in the fifteenth century In other poems also giants and demons, heathens and Mohammedans, have put in their mouths what no Christian knight is permitted to say."

These epochs interpret one another.

Æschylus already knew the defiantly egoistic story of Sardanapalus and made an effective use of it in his drama "The Persians." The most powerful scene in this glorification of the victory of the Greeks over the Persian intruder Xerxes is the appearance of the ghost of Darius, denouncing the folly of Xerxes; the spectators must have been deeply moved by Darius's condemnation of the expedition of Xerxes as an act of insolence and godlessness.

Darius counsels two ways of salvation: the avoidance of an expedition of revenge against Greece and the refusal to renounce even in misfortune, a life full of pleasure.

Darius censures Xerxes and advises him, like the most pious and most patriotic Greek, henceforth to leave the Greeks in peace; but the maxim at the conclusion of the scene is as un-Hellenic and realistic as possible; it is Sardanapalic. It seems doubtless that Æschylus intended to depict the king, who bears otherwise the character of a Greek, as an Oriental, as a Sardanapalus, in the lines 840 ff.: "But ye, O aged men, be merry though in the midst of troubles, and indulge yourselves in pleasure day by day, since wealth is of no avail to the dead."

But it is not only the hedonistic maxim which is the same in the epitaph of Sardanapalus and in the drama of Æschylus. As Sardanapalus utters his admonition from the grave, so Darius conjured from his tomb by the chorus addresses the members of the chorus, representing Persian grandees and satraps. The dead kings are earnest and true: Darius and the Assyrian have tasted the life after death, before they give counsel to the living. But the legend must be older than Æschylus: he is the oldest witness for Athens, but not the only one. Aristophanes in his comedy *The Birds* introduces a messenger of the Athenian Demos whom Peisthetæros receives in the airy city of the birds with an exclamation of surprise, saying "Who is this Sardanapalus here?" The poet must have believed that his Athenian audience was familiar with the name and connected therewith some definite idea. The Sardanapalus legend accordingly was in those days not unknown in Athens.

Herodotus in one place promises to tell the story of Sardanapalus and the destruction of Nineveh, but did not keep his promise; if it was ever put into writing, it was certainly not published. It is possible, however, that the people became familiar with the subject of the Ἀσύριοι λόγοι through the public lectures which Herodotus is known to have given. Others who quote the Sardanapalian sentence did not content themselves with mitigating the frivolity of the inscription; they idealised the type, each after his own fashion.

Here are instances. We read (Epigr. 1129, Kaibel):

“πῖνε” λέγει τὸ γλύμμα “καὶ ἔσθιε καὶ περιέκεισο
ἀνθεα · τοιοῦτοι γεινόμεθ’ ἐξαπίνης.”

[“Drink, says the engraved inscription, and eat and deck thee with flowers. On a sudden we become such (i. e., revellers).”]

The epitaph of Bacchidas (Athen. VIII. 336. B.) expresses this still more vigorously and reminds us of Aeschylus, Persae, v. 840 ff.:

πιὲν φαγὲν καὶ πάντα τᾷ ψυχᾷ δόμεν·
κῆγὼ γὰρ ἔστακ’ ἀντὶ Βακχίδα λίθος·

[“To drink, to eat, and to let our soul indulge in everything; I stand here, a stone instead of Bacchidas.”]

See also *C. I. L.* VI. 3, 17985a (19683) *animulam colui nec defuit unquam Lyaeus*: “I cultivated my little soul, and never Lyaeus (i. e., Bacchus, deliverer from care; wine) was missing.” Similarly the epigr. 267 (Kaibel).

Life a Feast: Bion (Stab. Flor. V. 67, Lucratius III. 936 f. Horace, Sat. I. 1. 117 ff. Heinze: On Horace as an Imitator of Bion p. 20 f.). 614 Kaibel (Rom):

εὐφρανθεὶς συνεχῶς γελάσας παίξας τε τρυνφήσας·
καὶ ψυχὴν ἱλαρῶς πάντων τέρψας ἐν ἀοιδαῖς
οὐδένα λυπήσας, οὐ λοῖδορα ῥήματα ῥύψας,
ἀλλὰ φίλος Μουσῶν Βρομίον Παφίης τε βιώσας κτλ·

[“Cheerful forever, laughing, frolicking and living luxuriously and joyously delighting the souls of all by songs, afflicting none nor casting about slanderous words, but living as a friend of the Muses, of Bromios and of the Paphian goddess (Aphrodite)].

Thus, the Orient here has again been Hellenised, as was done in many similar instances and these modifications of the inscribed maxim have also been preserved, especially in epitaphs, through all phases of the history of antiquity, so that side by side with absolute materialism its modifications and manifold contrasts continue to exist. Here are some instances.

It is interesting to observe how the priest of Sabazius has appropriated to himself one of the Hellenised forms of the Sardanapalic maxim, even with energetic polemics. The words of the inscription of Vicentius "As long as thou livest, act well; this thou wilt take with thee (after life)," have their analogies in the variations of the maxim of Sardanapalus, though used with an essentially different meaning.

Thus the maxim had been transformed already in the fifth century: "Know that thou art mortal; therefore indulge in the delights of feasting; naught thou wilt have in death. For I too am cinders who have been once the king of mighty Nineveh. Mine is but that which I have enjoyed in eating, drinking, embracing; the blessing of fortune I have had to leave behind me."

In early days protest was raised also against this form of the maxim. It has not been abolished which is proved by the epitaphs in Greek and Latin, and many passages in literature. Also Vincentius protests; he declares: Thou shalt act well, as long as thou livest; thy good deeds accompany thee into the after life where they prove their value in peculiar wise." The belief is extraordinarily ancient; the type is the common possession of all civilised nations.

In the Vedas the dead are addressed: "Walk on the old paths on which our ancestors strode . . . Unite thyself with thy forefathers and with Yama, with the reward for thy sacrifices and good works in the highest heaven."¹

Many popular legends of the Germanic and Romanic tribes are based upon the presupposition that the good and the sinful deeds of a man are actually laid up in the "other world"; there everything is not only recorded but stored.

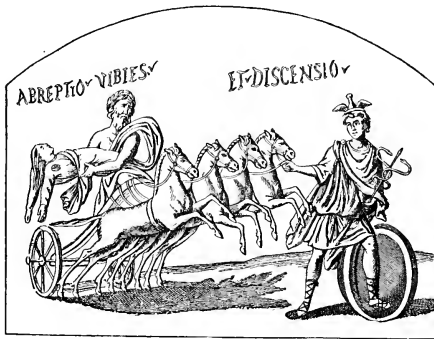
In pictures of Egyptian books of the dead we see, even to-day, how the deeds of the departed, represented as merchandise, are literally weighed on the scale by the judge of the lower world. According to the belief of modern Greeks this business is the task of one of the Archangels. In the Paulinian Apocalypse the Lord says to a punished soul: "Knowest thou not that a man's deeds, the good and the wicked, stalk before him, as soon as he has died?" Who would not be inclined to consider this image as typically Christian, if it stood alone. Who does not know the words of the heavenly voice (Revel. XIV. 13): "Blessed are the dead who die in the Lord from henceforth, yea, saith the spirit, that they may rest from their labors; and their works do follow them." But the use of this

¹ Oldenberg, p. 573 f.

beautiful allegory was not limited to the Christians (cf. Pindar, *Isthm.* III, 4 ff.; Plato, *Rep.* X. p. 614 c., *Gorgias* 524 e ff; Lucian, *Catapl.* 24 ff.)

The inscription on the tomb of Vincentius must have originated in a narrow, definite sphere. We shall understand its spirit better if we consider the pictorial ornament of the tomb. It is a remarkable monument that is not yet sufficiently appreciated. The mural paintings represent with vivid and deep feeling the hopes and the expectation of the joys in the other world, cherished by the devotees of Sabazius.

Vibia, the goodly spouse of the Sabazius priest Vincentius, snatched away by the god of death, according to an ancient conventional scheme which was also employed in representations of



THE RAPE OF VIBIA AND HER DESCENT.

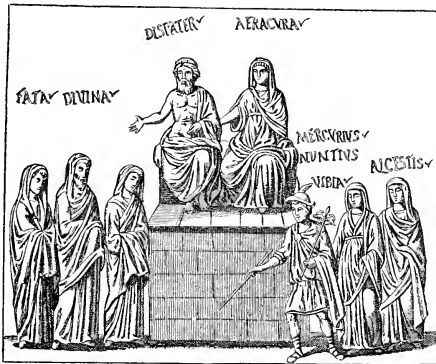
the rape of Proserpine—this ‘*abreptio Vibies*’ is the subject of the first image. The fundamental idea: the rape of death’s bride, is as such, of course, no original one. Every woman who dies is wedded to Hades, according to ancient views. The idea that the God of death is thought of as driving in a chariot is Homeric, for Pluto is said “to drive his splendid team.” Men and youths, after their death, enter the bridal chamber of Persephone. Both poetry (especially the *Cornelia-Elegy* of Propertius) and inscriptions on tombstones, reiterate this idea in countless variations.

The second picture represents Vibia conducted by Hermes to the three Fates, to receive their judgment, and passing by the throne of Dispatēr and of *Æracura* (or *Juno inferna*), the god and goddess of the nether world. Vibia is accompanied by *Alcestis*, the

prototype of a true wife who has willingly sacrificed herself for her husband.¹

The doctrine of the departed souls' being conducted solemnly to the nether world is neither specifically Greek nor Orphic. Mani taught: "If death approaches the righteous, the 'primordial man' (*Urmensch*) sends to him a god radiant of light, in the shape of the 'leading sage'; three gods accompany the sage and carry the water-vessel, the garment, the fillet, the crown, and the wreath of light. With them the virgin approaches who resembles the soul of the righteous," etc.²

The Italian Renaissance adopted from Antiquity the notion of a mythological escort and employed it in art and poetry.³ Accord-



BEFORE THE TRIBUNAL OF THE RULER OF THE NETHER WORLD.

ing to the poem by Bernardo Pulci on the death of the older Cosimo, the latter is received in Heaven by Cicero, who likewise was called

¹Probably Plato did more to immortalise the conjugal love of Alcestis than Hesiod and Euripides (*Sympos.* 7, p. 179C): "And when Alcestis had accomplished this deed, she seemed not only to men but even to gods to have fulfilled a work so noble, that the gods (who granted to but few of those who had performed many noble exploits, the boon that their souls could reappear from Hades) allowed her soul to come up from Hades, for they admired Alcestis."

This is evident in the inscription *C. I. C.* III. 6336, where the departed tells of herself: "My Asiatic home is (the island) Aphrodisias; on account of Piety, whose name I have honored. And I was that Alcestis who in olden times loved her spouse, and gods and mortals bore testimony of her chastity (*sophrosyne*)."

Propertius has v. 7. v. 63 ff. different types of conjugal love: Besides Andromeda and Hypermnestra his Cynthia dwells in Elysium conversing with others about their lives.—One remembers also Virgil and Dante.

²Cf. Kessler, Mani, p. 398 f.

³Cf. J. Burckhardt, II. 4. p. 149 ff., 299.

“Father of the Fatherland,” by the Fabians etc.; Nicolo dell’ Arca, a clay-modeller, is welcomed there by Praxiteles, Phidias, and Polyclethus. The Catholic Church has even nowadays not yet given up the allegory.¹

The three Fates (called *Fata Divina* in our picture) are the Moirai of the Greek nether world. But the middle Fate seems to be bearded and surpasses the others in stature. Which divine being does this figure represent? Perchance one of the judges of the nether world, Minos, Æacus or Rhadamanthys. It is impossible to think that it represents Sabazius whose consecrations Vibia like her husband must be supposed to have received. Besides, the entire feasting assembly of the pious Sabazius priests—seven per-



THE LOVE FEAST IN THE ELYSIAN FIELDS.

sons, among whom is Vincentius—is represented in another part of the great picture.

Probably inscriptions, such as “O unhappy fate which has taken thee from us!” (“*O Fatum infelicem, qui te nobis abstulit!*”) guide us to the right track. We may here be confronted with a male Fate, a “Fatus,” as in the Vibia-picture!

Since the god of fate occurs not only on Roman but also on Greek monuments, one should not think of the origin of this type as Roman. Two Moirai at the side of Zeus or of Apollo Moiragetes (the leader of fates) may be noticed upon Delphic and other Greek monuments.

The fourth picture is divided into two sections. At the left Vibia is guided by the “Angelus bonus” to the “blessed,” the “*bonorum iudicio iudicati.*” The “Angelus” or even “the blessed”

¹ Cf. E. Zola, *Lourdes*, II. p. 124. R. Koehler, *Aufsätze*, p. 50 ff.

must not at all be considered to be of Christian or Jewish origin. The “*boni*” are, by euphemism, the inexorably severe inhabitants or judges of the nether world and appear as such also elsewhere, being otherwise called benign fates (*benigna Fata*), *Di manes* (the spirits of the dead) the indispensable gods (*θεοὶ χρηστοί*) etc.

The “good messenger” or Angel belongs to the ancient Greeks as well as to the Christians, which is a clearly proven fact. (Cf. *Indogermanische Studien* von Brugmann und Streitberg, I, p. 157, ff.; Plato speaks of the Angel of Elysium: Rep. X. 619 B; as for St. Michael as conductor of souls, see R. Koehler, *Aufsätze*, p. 51.)

At the right the blessed, with crowns on their brows, are resting in a flowery meadow: some feasting, among whom is Vibia;



THE SEVEN PRIESTS, VINCENTIUS AMONG THEM.

some playing dice. It almost looks like an illustration of Pindar's wonderful *Threnos* or of Virgil's *Nekyia*. By adorning his wife's tomb and his own with pictures, Vincentius believed that he would secure, for himself and his wife, who probably had died before him, the realisation of happiness in the life after death. This same idea has since remotest antiquity induced many to build their tombs during their life and to equip and decorate them for another life. Some of the Egyptian tombs containing painted images of the other world belong to the second millennium B. C., according to the views of scholars. The much more recent Greek celebration of mysteries aimed to represent to the initiated joyous expectations regarding the other world and thus to give visible form to the religious ideal of the believers. This has been preserved as far as to

the great festivals celebrated during the ages of the Renaissance and even, partially, to our days.

The beautiful saying that "their deeds accompany the dead," is also Greek and by no means a late conception; the saying itself, its explanation through the picture of Alcestis, even the common conception upon which both are based, can, by means of a literary document, be proved with absolute certainty to have prevailed before the spreading of Christianity. They are certainly due to the poetry of the world beyond, and to the religion of the Greeks of the classical period. The Sabazius priests have derived the verses, the composition of the pictures, and their ethics from the Orphics.

THE OLD AND THE NEW MAGIC.

BY THE EDITOR.

THE very word magic has an alluring sound, and its practice as an art will probably never lose its attractiveness for people's minds. But we must remember that there is a difference between the old magic and the new, and that both are separated by a deep chasm, which is a kind of color line, for though the latter develops from the former in a gradual and natural course of evolution, they are radically different in principle and the new magic is irredeemably opposed to the assumptions upon which the old magic rests.

The old magic is sorcery, or, considering the impossibility of genuine sorcery, the attempt to practise sorcery. It is based upon the pre-scientific world-conception, which in its primitive stage is called animism, imputing to nature a spiritual life analogous to our own spirit, and peopling the world with individual personalities, spirits, ghosts, goblins, gods, devils, ogres, gnomes, and fairies. The old magic stands in contrast to science; it endeavors to transcend human knowledge by supernatural methods and is based upon the hope of working miracles by the assistance of invisible presences or intelligences, who according to this belief could be forced or coaxed by magic into an alliance. The savage believes that the evil influence of the powers of nature can be averted by charms or talismans and their aid procured by proper incantations, conjurations, and prayers.

The world-conception of the savage is long-lingering, and its influence does not subside instantaneously with the first appearance of science. The Middle Ages are still full of magic, and the belief in it has not died out to this day.

Goethe introduces the belief in magic into the very plot of Faust. In his despair at never finding the key to the world-problem in science, which, as he thinks, does not offer what we need, but

useless truisms only, Faust hopes to find the royal road to knowledge by supernatural methods. He says :

“ Therefore, from Magic I seek assistance,
That many a secret perchance I reach
Through spirit-power and spirit-speech,
And thus the bitter task forego
Of saying the things I do not know,—
That I may detect the inmost force
Which binds the world, and guides its course ;
Its germs, productive powers explore,
And rummage in empty words no more ! ”

The old magic found a rival in science and has in all its aspects, in religion as well as in occultism, in mysticism and obscu-



SAUL AND THE WITCH OF ENDOR. (After Schnorr von Carolsfeld.)

rantism, treated science as its hereditary enemy. It is now succumbing in the fight, although its last vestiges which prove toughest in their survival, viz., the notions of an animistic God-conception and an animistic soul-conception, are still haunting the minds of ultra-conservative people. In the meantime a new magic has originated and taken the place of the old magic, performing miracles as wonderful as those of the best conjurers of former days, nay, more

wonderful; yet these miracles are accomplished with the help of science and without the least pretense of supernatural power.

The new magic originated from the old magic when the belief in sorcery began to break down, viz., in the eighteenth century, which is the dawn of rationalism and marks the epoch since which mankind has been systematically working out a scientific world-conception.

Magic originally means priestcraft, being that which characterises the Magi, the Iranian priests. It is probable that the word



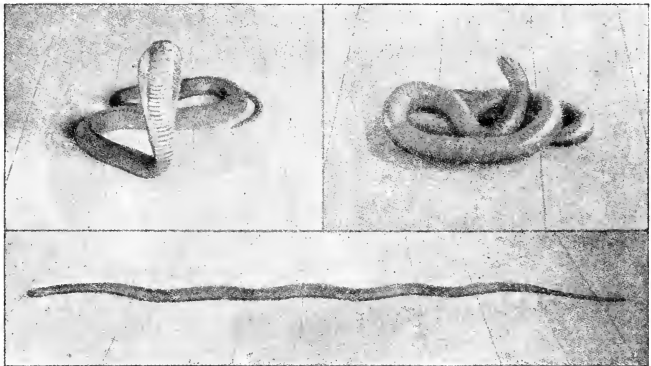
MOSES AND AARON PERFORMING THE MIRACLE OF THE SERPENTS BEFORE PHARAOH
(After Schnorr von Carolsfeld.)

is very old, being handed down to us from the Greeks and Romans who had received it from the Persians. But they in their turn owe it to the Babylonians, and the Babylonians to the Assyrians, and the Assyrians to the Sumero-Akkadians.

Imga in Akkad meant priest, and the Assyrians changed the word to *maga*, calling their high-priest *Rab-mag*; and considering the fact that the main business of priests in ancient times consisted in exorcising, fortune-telling, miracle-working, and giving out oracles, it seems justifiable to believe that the Persian term, which in its

Latin version is *magus*, is derived from the Chaldæan and is practically the same; for the connotation of a wise man endowed with supernatural powers has always been connected with the word *magus*, and even to-day magician means wizard, sorcerer, or miracle-worker.

In primitive society religion is magic, and priests are magicians: The savage would think that if the medicine-man could not work miracles, there would be no use for religion. Religion, however, does not disappear with the faith in the medicine man's power. When magic becomes discredited by science, religion is purified. We must know, though, that religious reforms of this kind are not accomplished at once but come on gradually in slow



THE EGYPTIAN SNAKE NAJA HAJE MADE MOTIONLESS BY PRESSURE UPON THE NECK
(Reproduced from Verworn after photographs.)

process of evolution, first by disappointment and then in exultation at the thought that the actualities of science are higher, nobler, and better than the dreams of superstition, even if they were possible, and thus it appears that science comes to fulfil, not to destroy.

While the belief in, and the practice of, magic are not entirely absent in the civilisation of Israel, we find that the leaders of orthodox thought had set their face against it, at least as it appeared in its crudest form, and went so far as to persecute sorcerers with fire and sword.

We read in the Bible that when the Lord "multiplied his signs" in Egypt, he sent Moses and Aaron to Pharaoh to turn

their rods into serpents, that the Egyptian magicians vied with them in the performance, but that Aaron's rod swallowed up their rods, demonstrating thus Aaron's superiority. It is an interesting fact that the snake charmers of Egypt perform to-day a similar feat, which consists in paralysing a snake so as to render it motionless. The snake then looks like a stick but is not rigid.

Exorcism is first replaced by prayer, and prayer together with other religious exercises (such as fasts, ecstasies, trances, visions, asceticism, with its various modes of self-mortification) are practised for the purpose of attaining supernatural powers. A higher religion is not attained until the sphere of religion is discovered in



MODERN SNAKE CHARMERS. (From Brehm.)

practical morality and prayer is changed into vows. Then supplications of the deity to attain one's will are surrendered for the moral endeavor of self-control, disciplining the will to comply with the behests of the moral ought.

How tenacious the idea is that religion is and must be magic, appears from the fact that even Christianity shows traces of it. In fact, the early Christians (who, we must remember, recruited their ranks from the lowly in life) looked upon Christ as a kind of magician, and all his older pictures show him with a magician's wand in his hand. The resurrection of Lazarus, the change of water into wine, the miracle of the loaves and fishes, are according to the no-

tions of those centuries performed after the fashion of sorcerers, and the main thing in early Christianity is Christ's alleged claim to the power of working miracles. The last injunction which Jesus gives to his disciples according to St. Mark (xvi. 15-18) is this :

"Go ye into all the world, and preach the Gospel to every creature. He that believeth and is baptised shall be saved ; but he that believeth not shall be damned. And these signs shall follow them that believe ; in my name shall they cast out devils ; they shall speak with new tongues ; they shall take up serpents ; and if they drink any deadly thing, it shall not hurt them ; they shall lay hands on the sick, and they shall recover."

It is apparent that Christianity in the days when this was written bore a strong resemblance to what is now called Christian



CHRIST WITH THE WAND.

From a Christian Sarcophagus.¹

science, faith cure, or mental-healing ; for the author of the above-quoted passage, the importance of which in the New Testament canon cannot be underrated, implies that any Christianity in which "these signs" are absent must be regarded as spurious.

Traces of the religion of magic are still prevalent to-day, and it will take much patient work before the last remnants of it are swept away. The notions of magic still hold in bondage the minds of the uneducated and half-educated, and even the leaders of prog-

¹ Reproduced from Mrs. Jameson's and Lady Eastlake's *History of Our Lord*, London, 1872. Longmans, Green & Co., Vol. I., pp. 347 and 349.

ress feel themselves now and then hampered by ghosts and superstitions. Thus Goethe makes Faust say at the end of his career :

“Not yet have I my liberty made good :
So long as I can't banish magic's fell creations
And totally unlearn the incantations.
Stood I, O Nature, as a man in thee,
Then were it worth one's while a man to be.
And such was I ere I with the occult conversed,
And ere so wickedly the world I cursed.”

To be a man in nature and to fight one's way to liberty is a much more dignified position than to go lobbying to the courts of the celestials and to beg of them favors. At the beginning of the drama Faust had turned agnostic and declared that we cannot know anything worth knowing, saying :

“That which we do not know is dearly needed ;
And what we need we do not know.”

And in another place :

“I see that nothing can be known.”

But now Faust is converted to science again, having found out that the study of nature is not a useless rummage in empty words. However, in the first and second decade of the nineteenth century the rationalism of the eighteenth century waned, not to make room for a higher rationalism, but to suffer the old bugbears of ghosts and hobgoblins to reappear in a reactionary movement. Progress does not pursue a straight line, but moves in spirals or epicycles. Periods of daylight are followed by nights of superstition. Faust (expressing here Goethe's own ideas) continues :

“Now fills the air so many a haunting shape,
That no one knows how best he may escape.
What though the day with rational splendor beams,
The night entangles us in webs of dreams.
By superstition constantly ensnared,
It spooks, gives warnings, is declared.
Intimidated thus we stand alone.
The portal jars, yet entrance is there none.”

The aim of man is his liberty and independence. As soon as we understand that there are not occult powers or spooks that must be conciliated by supplications and appeased, but that we stand in nature from which we have grown in constant interaction between our own aspirations and the natural forces regulated by law, we shall have confidence in our own faculties, which can be increased by investigation and a proper comprehension of conditions, and we shall no longer look beyond but around. Faust says :

" A fool who to the Beyond his eyes directeth
 And over the clouds a place of peers detecteth.
 Firm must man stand and look around him well,
 The world means something to the capable."

This manhood of man, to be gained by science through the conquest of all magic, is the ideal which the present age is striving to attain, and the ideal has plainly been recognised by leaders of human progress. The time has come for us "to put away childish things," and to relinquish the beliefs and practices of the medicine-man.

But while magic as superstition and as fraud is doomed, magic as an art will not die. Science will take hold of it and permeate it with its own spirit changing it into scientific magic which is destitute of all mysticism, occultism, and superstition, and comes to us as a witty play for recreation and diversion.

It is an extraordinary help to a man to be acquainted with the tricks of prestidigitators,¹ and we advise parents not to neglect this phase in the education of their children. The present age is laying the basis of a scientific world-conception, and it is perhaps not without good reasons that it has produced quite a literature on the subject of modern magic.

It might seem that if the public became familiar with the methods of the magicians who give public entertainments, their business would be gone. But this is not the case. As a peep behind the scenes and a knowledge of the machinery of the stage only help us to appreciate scenic effects, so an insight into the tricks of the prestidigitator will only serve to whet our appetite for seeing him perform his tricks. The prestidigitator will be forced to improve his tricks before an intelligent audience; he will be obliged to invent new methods, but not to abandon his art.

Moreover, it is not the trick alone that we admire, but the way in which it is performed. Even those who know how things can be made to disappear by sleight of hand, must confess that they always found delight in seeing the late Alexander Hermann, whenever he began a *soirée*, take off his gloves, roll them up and make them vanish as if into nothingness.

It is true that magic in the old sense is gone; but that need not be lamented. The coarseness of Cagliostro's frauds has given way to the elegant display of scientific inventiveness and an adroit use of human wit.

¹ It seems that the anglicised form "prestidigitator" is preferable to the French word *prestidigitateur*.

Cagliostro, whose real name was Joseph Balsamo, was the last great magician in the old sense of the word. We may admire his genius and the fertility of his inventions, as we give credit to the cunning of a pickpocket, a highwayman, or a burglar. Though a brilliant mind, he was a pretender who began his career with forgery and ended his days (no one knows how) in a dungeon of the Roman Inquisition. The genius with which he practised his art was deserving of a better treatment, but he was a freemason, and



THE CONJURER. (By Prof. W. Zimmer.)

in those days that was a crime at Rome incurring the penalty of death.¹

Modern mediums are harmless successors of Cagliostro with analogous though considerably diminished pretensions; but their tactics have changed utterly; they try to shield themselves by disavowing all claims to the possession of magic, and concealing their tricks under the guise of a student's modesty. They play the part of inquirers and pretend to be confronted with phenomena not yet

¹Cagliostro was actually condemned to death by his judges, members of the Inquisition, not for the frauds which he practised on the credulous, but as a freemason. The Pope commuted the sentence to imprisonment for life and had him deported to the fortress of San Leon. It is not likely that he received good treatment, for his wardens feared him on account of his supposed magical powers. His death seems to have occurred August 26, 1795.

explained, inviting the people to investigate certain psychological problems that seem physically inexplicable.

Modern magic begins with a number of brilliant prestidigitators, men like Jonas, Androletti, Carlotti, Pinetti, Katerfelto, Jacob Meyer (called Philadelphia), Rollin, the older Cosmus, Torrini, etc., all contemporaries of Cagliostro; but their fame was eclipsed by Jean Eugene Robert Houdin (1805-1871) who was followed by Robert Heller, the younger Cosmus, Robertson, Pepper, Bellachini, Mellini, Agaston, Becker, Lorgie, Rönner, Roberth, various members of the Basch, and no fewer of the Hermann families, Kellar, Maskelyne, and others.

The old magic still continues to haunt the minds of the uncultured, and will resist all exposés and explanations, until it is replaced by modern magic. For this reason we believe that the spread of modern magic and its proper comprehension are an important sign of progress, and in this sense the feats of our Kellars and Hermanns are a work of religious significance. They are instrumental in dispelling the fogs of superstition by exhibiting to the public the astonishing but natural miracles of the art of legerdemain; and while they amuse and entertain they fortify the people in their conviction of the reliability of science.

* * *

While the performance of magical tricks is an art, the observation of them and also their description is a science, presupposing a quick and critical eye of which very few people are possessed; and scientists by profession are sometimes the least fit persons to detect the place and mode of the deception.

How differently different persons watch the same events becomes apparent when we compare Professor Zöllner's reports of spiritualistic séances with those of other more critical witnesses. Professor Zöllner, for instance, writes (*Wissenschaftliche Abhandl.* Vol. III, p. 354) in his description of one of the experiments with Mr. Slade that Professor Fechner's chair was lifted up about half a foot above the ground, while Mr. Slade touched the back of it lightly with his hand, and he emphasises that his colleague after hovering some time in the air, was suddenly dropped with great noise. The event as thus described is mystifying. However, when we carefully compare Professor Fechner's account, we come to the conclusion that the whole proceeding is no longer miraculous, but could be repeated by prestidigitators. Fechner writes that at the request of Mr. Slade, he himself (Professor Fechner), who was slim and light, took the place of Professor Braune. Mr. Slade turned round to

Professor Fechner and bore his chair upward in a way which is not at all inexplicable by the methods of legerdemain. Professor Fechner does not mention that he hovered for some time in the air, but



PROFESSOR ZÖLLNER AND SLADE. (From Willmann.)

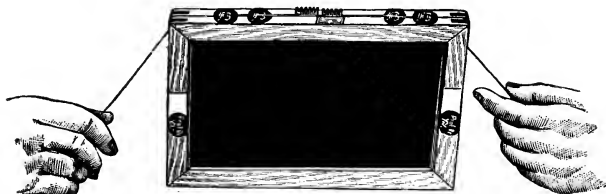
it is obvious that Mr. Slade made the two professors change seats because he would scarcely have had the strength to lift up the heavy Professor Braune.

Similarly, the accounts of the famous painter Gabriel Max,

who also attended some of Slade's séances with Zöllner, make the performances of the medium appear in a less wonderful light.

Mr. Carl Willmann, a manufacturer of magical apparatus at Hamburg, and the author of several books on modern magic, publishes a circumstantial description of Professor Zöllner's double slates used in séances with Mr. Slade, which are now in possession of Dr. Borchardt of Hamburg, who bought them with other objects of interest from the estate of the deceased Professor Zöllner. The seals of these plates are by no means so intact as not to arouse the suspicion that they have been tampered with. To a superficial inspection they appear unbroken, but the sealing wax shows vestiges of finger marks, and Mr. Willmann has not the slightest doubt that they were opened underneath the seal with a thin heated wire and that the seal was afterwards again attached to its place.

Professor Zöllner, the most famous victim of the bold medium, lacked entirely the necessary critique and became an easy prey of



THE OPENING OF SLADE'S SLATE BY MEANS OF A HEATED WIRE.
(After Willmann.)

fraud. One of his colleagues, a professor of surgery in the University of Leipsic, had entered upon a bet with Professor Zöllner that a slate carefully sealed and watched by himself could not be written upon by spirits; he had left the slate in Professor Zöllner's hands in the confidence that the latter would use all the necessary precautions. Professor Zöllner, however, not finding Mr. Slade at home, saw nothing wrong in leaving the sealed slate at the medium's residence and thus allowing it to pass for an indefinite time out of his own control, thinking that the seals were a sufficient protection. It goes without saying that his colleague at once cancelled the bet and took no more interest in the experiment.

The foot and hand prints which Mr. Slade produced were apparently made from celluloid impressions which could easily be carried about and hidden in the pocket. This explains why these

vestiges of the spirits were not of the size of Mr. Slade's hands or feet.

Mr. Willmann calls attention to the fact that the foot-prints as published by Professor Zöllner were made from feet whose stockings had been removed but a few moments before, for they still show the meshes of the knitting which quickly disappear as soon as the skin of the foot grows cold. Professor Zöllner did not see such trifles, and yet they are important, even if it were for the mere purpose of determining whether the spirits wear stockings made in Germany or America.

* * *

The accounts of travellers are as a rule full of extravagant praise of the accomplishments of foreign magicians; thus, the feats



THE SINGALESE CONJURER BEN-KI-BEY.
(After Carl Willmann.)

of our American Indians are almost habitually greatly exaggerated. The same is true in a greater measure of fakirs and Hindu magicians. Recent accounts of a famous traveller are startling, but the problem is not whether or not what he tells is true (for only a little dose of good judgment is sufficient to recognise their impossibility), but whether or not he believes his tales himself. The problem is neither physical nor historical as to the reality of the events narrated, the problem is purely psychological as to his own state of mind.

The primitive simplicity of the methods of the Hindu jugglers and the openness of the theater where they perform their tricks is a cause of wonder to those who are not familiar with the methods of

legerdemain. Mr. Willmann, who had occasion to watch Hindu magicians, says in his book, *Moderne Wunder*, page 3: "After a careful investigation, it becomes apparent that the greatest miracles of Indian conjurers are much more insignificant than they appear in the latest reports of travellers.¹ The descriptions which in our days men of science have furnished about the wonderful tricks of fakirs have very little value in the shape in which they are rendered. If they, for instance, speak with admiration about the invisible growth of a flower before their very eyes, produced from the seed deposited by a fakir in a flower-pot, they prove only that even men of science can be duped by a little trick the practice of which lies without the pale of their own experience."

Eye-witnesses whose critical capacities are a safeguard against imposition relate more plausible stories. John T. McCutcheon describes the famous trick of growing a mango tree, as follows:

"The further away from India one is the greater appears the skill of these Hindu magicians. How often have we read the traveller's tales about the feats of Indian jugglers, and how eagerly we have looked forward to the time when we might behold them and be spellbound with amazement and surprise. When I first saw the India juggler beginning the preparations for the mango trick I was half prepared by the traveller's tales to see a graceful tree spring quickly into life and subsequently see somebody climb it and pick quantities of nice, ripe mangoes. Nothing of the kind happened, as will be seen by the following description of the mango trick as it is really performed.

"The juggler, with a big bag of properties, arrives on the scene and immediately begins to talk excitedly, meanwhile unpacking various receptacles taken from the bag. He squats down, pipes a few notes on a wheezy reed whistle and the show begins. From his belongings he takes a little tin can about the size of a cove oyster can, fills it with dirt and saturates the dirt with water. Then he holds up a mango seed to show that there is nothing concealed by his sleeves; counts "ek, do, tin, char," or "one, two, three, four," and imbeds the seed in the moist earth. He spreads a large cloth over the can and several feet of circumjacent ground. Then he plays a few more notes on his reed instrument and allows the seed a few minutes in which to take root and develop into a glorious shade tree. While he is waiting he unfolds some snakes from a small basket, takes a mongoose from a bag and entertains his audience with a combat between the mongoose and one of the snakes.

"Ek, do, tin, char; one, two, three, four—plenty fight—very good mongoose—biga snake—four rupee mongoose—two rupee snake—mongoose fight snake Look—gentlymans—plenty big fight.

"All this time the cloth remained peaceful and quiet, and there were no uneasy movements of its folds to indicate that the mango crop was flourishing. The juggler now turned his attention to it, however, poked his hands under the cloth, and after a few seconds of mysterious fumbling triumphantly threw off the cloth, and lo, there was a little bunch of leaves about as big as a sprig of water cress

¹ Referring to an account.

sticking up dejectedly from the damp earth. This was straightway deluged with some water and the cloth again thrown over it.

"Once more there was a diversion. This time an exhibition of a shell game, in which the juggler showed considerable dexterity in placing the little ball where you didn't think it would be. Still the cloth revealed no disposition to bulge skyward, and a second time the juggler fumbled under it, talking hurriedly in Hindustani and making the occasion as interesting as possible. After much poking around he finally threw off the cloth with a glad cry, and there was a mango tree a foot high, with adult leaves which glistened with moisture. When his spectators had gazed at it for awhile he pulled the little tree up by the roots, and there was a mango seed attached, with the little sprouts springing out from it.

"The trick was over, the juggler's harvest of rupees and annas began, and soon his crowd faded away. A few minutes later, from a half-hidden seat on the hotel veranda, I saw the wizard over across the street, beneath the big shade trees, folding up the mango tree and tucking it compactly into a small bag."¹

¹ Chicago Record, April 22, 1899.

[TO BE CONCLUDED.]

THE CONCEPT.¹

BY PROF. ERNST MACH.

THE first *movements* of new-born animals are responses to outward or inward excitations, which excitations are effected *mechanically* without the intervention of the intellect (the memory), and have their foundation in the inherited organism. They are *reflex* movements. Under this head belong the pecking of young chicks, the opening of the bills of young birds on the return of their parents with food, the swallowing of the food placed in their gullets, the suckling of young mammals, etc. It may be shown that the interference of the intellect not only does not enhance these movements, but frequently has a tendency to disturb them even.²

It will happen that a great variety of pleasurable and unpleasurable sensations will be produced during this process, and these sensations, which are peculiarly adapted to disengaging reflex movements, will become associated with others, which in themselves may be indifferent, and will be ultimately stored up in the memory, which has likewise gradually and simultaneously developed. Some small portion of the original excitation may then evoke the memory of the entire excitation, and this memory in turn may evoke the entire movement. The young sparrow described by me in another place affords a good instance of this,³ and young mammals prompted by the sight of their mother to seek nourishment, furnish a second example. The movements which thus take place are the *final term of a series of associations*; they are no longer reflex move-

¹ Translated from Mach's *Wärmelehre* by T. J. McCormack.

² It is well known that after children have once been weaned they can be brought to take the breast again only with great difficulty. But it may be necessary in cases of illness to make them do so, and having noticed in one instance of this kind that the movements of sucking were actually performed during sleep, I took advantage of the situation and caused the child, while asleep and unconscious, to be laid to its mother's breast, with the result that the desired movements occurred and the difficulty was overcome.

³ Compare my *Analysis of the Sensations*, Chicago, The Open Court Publishing Co., 1897.

ments, they are now called *spontaneous* movements. The question whether the innervation as such makes its appearance in consciousness not only by its results, but also immediately, we shall forego, since it is a debated one and since the answer to it is not absolutely necessary to our purpose.¹

As soon as a movement *B* which has ordinarily followed as a *reflex* upon an excitation *R* is induced *spontaneously* by some excitation *S*, which is associated with *R*, the most varied complications may arise, as a result of which entirely new excitational combinations, and in consequence entirely new motor combinations, may be produced. A young animal which has reached maturity is observed to seize an object which *appears* fit for food, sniff at it, nibble at it, and finally to bolt it or cast it away. Young anthropoid apes, so Mr. R. Franceschini informs me, are in the habit of biting forthwith into everything offered them, whereas old apes will toss aside objects for which they have no use after cursory inspection only. Infants too are wont to thrust into their mouths every object they can lay hold of. A friend of mine once observed a child grasp repeatedly at a burnt spot on a table, and immediately convey the supposed object with comical earnestness to its mouth.

Under *different* circumstances having something *in common*, accordingly, the *same* activities, the same movements, are produced, (grasping, sniffing, licking, and biting). These are productive of new sensory attributes, (odors, tastes, etc.), which become in their turn *determinative* and shape the subsequent behaviour of the animal (as swallowing, laying aside, etc.) Now it is these *accordant* activities, together with the *sensory attributes* evoked by them, both of which are in some manner elevated into consciousness, that constitute, as I take it, the *physiological* foundations of the *concept*. Wherever *like* reactions are induced, there the same concept is evoked; as many reactions as there are, so many concepts will there be. No one will feel disposed to deny to an animal that has acted in the manner described, the possession of something like the germs of the concepts "food," "non-food," etc., even though the words designating these concepts be wanting. But even designation by speech, in the form of calls and cries, may under certain circumstances accompany the acts we are considering, notwithstanding the fact that the calls are provoked involuntarily and never clearly appear in consciousness as deliberate signals. The concepts which originate in this manner will be exceedingly comprehensive and vague in character; but they are none the less the

¹ Compare W. James's *Psychology*, New York, 1890, Vol. II.

most important for the animal. The situation of the primitive man is not essentially different. The consequences of the activities employed by him in his explorations and in the attaining of his ends may be considerably complicated. Take, for instance, his stopping and listening on hearing the slightest noise; his pursuit and capture of his prey; his picking, cracking, and opening of nuts, etc. The behaviour of civilised man is distinguished from that of the animal and primitive man merely by the fact that he possesses more varied and more powerful facilities for investigation and for the attainment of his ends; that he is able owing to his richer memory to make use of more circuitous methods and of a greater number of intermediary agencies (instruments); that his senses are capable of making more refined and more comprehensive observations; and, finally, that he is enabled by the richer store of language at his command to define with greater minuteness and with greater precision the elements of his activity and sensory perception, to represent these same elements clearly in his memory, and to bring them within range of the observation of others. The behaviour of the natural inquirer offers merely a further difference of degree as compared with the preceding case.

A chemist *is able* to recognise a piece of sodium at sight, but does so on the presupposition that a definite number of tests which he has clearly in mind will unfailingly give the results which he expects. He can apply the concept "sodium" to the body in question *with certainty* only provided he actually finds the same to be soft as wax and easily cut, to have a silver sheen on the cut surface, to tarnish readily, to have the capacity to float and to rapidly decompose water, to have the specific gravity 0.972, to burn with a yellow flame when ignited, to have the atomic weight 23, and so on. The concept "sodium," accordingly, is merely the aggregate of a certain series of *sensory attributes* which make their appearance upon the performance of certain *definite* manual, instrumental, and technical operations, considerably complicated in character. The concept *whale* stands for an animal which has outwardly the form of a fish, but which on careful anatomical examination is found to have a double circulation, to breathe by means of lungs, and to possess all the other classificatory marks of the mammals. For the physicist the concept "electro-magnetic unit" ($cm^{\frac{1}{2}}g^{\frac{1}{2}}sec^{-1}$) stands for that galvanic current which acting with a magnetic horizontal component of $H=0.2$ ($gr^{\frac{1}{2}}cm^{-\frac{1}{2}}sec^{-1}$) on a magnetic needle suspended in the center of a circular wire of radius 31.41 cm. through which the current has been made to pass, turns that needle 45

degrees out of the meridian. This presupposes an additional set of operations for determining *H*.

The behaviour of the mathematician is similar. A circle is thought of as a line in a plane, every point of which line can be shown by measurement or otherwise to be equidistant from a certain point in the plane. The sum of $7+5$ is that number, 12, which is reached by counting onward 5 numbers from 7 in the natural scale. In these cases also we are required to perform certain well-defined *operations* (the measurement of lengths, counting), as the result of which certain sensory attributes (namely, the equality of the lengths in the one case, and the number 12 in the other) make their appearance. The well-defined activities in question, whether simple or complicated, are analogous in every respect to the operations by which an animal tests his food; and the sensory attributes referred to are analogous to the odor or taste which is determinative of the further behaviour of the animal.

Many years ago, I made the observation that two objects appear *alike* only in case the sensation-complexes corresponding to the two objects contain common, congruent, and *identical* components. This observation has been abundantly illustrated elsewhere in my works, and I have given of it numerous examples (symmetric and similar figures, melodies of the same rhythm, etc.¹) Attention was also drawn to the æsthetic value of the repetition of the same *motif*.² The idea was then naturally suggested that there lay at the basis of every *abstraction* certain *common real* psychical elements, representative of the components of the concept,³ be those elements ever so recondite. And it was found that the elements in question were commonly brought to consciousness by some special and definite activity,—a fact which has been sufficiently discussed in connexion with the examples given above.

The concept is enigmatic for the reason that on the one hand it appears in a logical aspect as the most definite of psychical constructs; while on the other hand, in a psychological aspect, when we seek for its real visualisable contents, we discover a very hazy

¹ See my *Contributions to the Analysis of the Sensations*, Eng. trans. Chicago, 1897.

² See the articles on the *Forms of Liquid* and on *Symmetry* originally published at Prague in 1872, and now embodied in the English translation of my *Popular Scientific Lectures*, third edition. Chicago, 1898. Compare also Soret, *Sur la perception du beau*, Geneva, 1892, which carries the æsthetic considerations much farther than my work, but does not go so deeply into the fundamental psychological and physiological conditions as does my *Analysis of the Sensations*.

³ Compare Mach, in *Fichte's Zeitschrift für Philosophie*. 1865. Page 5.

picture only.¹ Now the latter, whatever its composition, must necessarily be an individual picture. The concept, however, is not a *finished image*,² but a body of directions for testing some actually existing image with respect to certain properties, or of constructing some image from given properties. The definition of the concept, or the name of the concept, disengages a definite activity, a definite reaction which has a definite result. The manner of the reaction,³ as well as of the result, must find its expression in consciousness, and both are characteristic of the concept. A body is electric when it exhibits certain properties in response to certain reactions. Copper is a body of which the bluish-green solution in dilute sulphuric acid exhibits a certain behaviour when subjected to a certain treatment, etc.

Inasmuch, therefore, as the group of operations which is involved in the employment of a concept is frequently complicated in character, it is not at all remarkable that the result of the same should be set forth before us as a visual picture only in the simplest cases. It is furthermore clear that the group of operations in question, like the movements of our body, must be thoroughly practised if we are really to possess the concept. A concept cannot be passively assimilated; it can be acquired only by doing, only by concrete experience in the domain to which it belongs. One does not become a piano player, a mathematician, or a chemist, by looking on; one becomes such, only after constant practise of the

¹ So long as this hazy picture is regarded as the main thing, no understanding of the concept can ever be reached. Mr. E. C. Hegeler has ingeniously compared the picture in question to Galton's composite photographs, which are obtained by superposing upon one another the pictures of the members of a family, whereby the differences are obliterated and the common features of the family brought into more prominent relief (See Dr. Paul Carus's *Fundamental Problems*, Chicago, 1889, page 38). I have compared this phenomenon of the concept to the ancient Egyptian paintings which combine in a single picture things which can be seen only by different views of it (*Economical Nature of Physical Research*, Vienna, 1882, English translation in *Popular Scientific Lectures*, Chicago, 1898, page 186). In my *Analysis of the Sensations*, I have given what I believe to be a more satisfactory explanation of the question.

² Compare *Analysis of the Sensations*.

³ Despite all that has been said to the contrary, I find it difficult to comprehend that the inner nature of a movement does not come directly to consciousness in some manner. The consequences only of the motion are said to be brought to consciousness by its sensations in the skin and the mere memory of these sensations is said to be sufficient to produce the movement again. It is quite true that we do not know how we perform a movement, but only what the movement is and that we wish to perform it. When I *will* to go *forward*, this psychological act is to my feeling in no wise opposed to the memories of the sensations which take place in my legs, but appears to me far simpler. It was once attempted to identify all sensations of movement with sensations of the skin, etc., but it is to-day more probable that these sensations proceed in a far simpler and consequently more reliable manner from definite, specific organs. If my conception is correct, then that sharp, delicate, and trustworthy feeling for the reactions belonging to certain concepts is much more easily intelligible. It appears to me as if one could speak in more than a merely figurative way of the innervation of imagination.

operations involved. When practice has been acquired, however, the word which characterises the concept has an entirely different sound for us from formerly. The impulses to activity which are latent in it, even when they do not come to expression, or do not appear in consciousness, still play the part of secret advisers which induce the right associations and assure the correct use of the word.¹

Just as a technical operation may serve for testing a given object (testing by weights, dynamometric tests, the record of an indicator diagram), or for constructing a new object (the building of a machine), so also a concept may be used in a testing or constructive sense. The concepts in mathematics are mostly of this character, whereas the concepts of physics which cannot create its objects, but finds them already present in nature, are ordinarily of the first-mentioned kind. But even in mathematics, figures arise independently of the inquirer, furnishing material for subsequent investigation; and in physics also concepts are constructed for economical reasons. But the fact that mathematics operates in the main with constructions of its own creation, containing only that which it itself has put into them, whilst physics must wait before it finds out how far the objects of nature answer to its concepts, —this fact is the foundation of the logical superiority of mathematics.

Many of the concepts of mathematics show still another peculiarity. Let us consider the simple concept of the sum of $a + b$, where a and b may first be supposed to be whole numbers. This concept contains the impulse to count onward b numbers from a in the natural series, when the last number, $a + b$, is arrived at. This act of counting on may be regarded as a muscular activity which is always the same in all cases, however different, and the beginning of which is determined by a and the end by b . Through variation of the values of a and b , an infinite number of cognate concepts is created. If a and b be conceived as members of a number-continuum, there results a continuum of related concepts for which the reaction-activity is throughout the same, but where the beginning and the end are determined by properties representing members of the same continuum. Analogous considerations hold with respect to the concept of product, etc. The existence of such con-

¹ I have had frequent occasion to observe the power which latent psychological elements possess. Approaching, while deeply absorbed in thought, the house of a friend, upon whom I intended to call, I have more than once surprised myself in the act of drawing forth my own latch key. The word in other cases may call forth the same result as did the sight of the door in the present instance, without arousing to consciousness everything which corresponds to this symbol.

ceptual continua offers great advantages in those sciences to which mathematics is applicable.

A reference here to the old controversy of the nominalists and realists will be in place. There seems to be a germ of truth in both views. The "Universals" possess no physical reality, but they do possess a physiological reality. The physiological reactions are of less complexity than the physical stimuli.

RHYME AND RHYTHM IN THE KORAN.

BY DANIEL J. RANKIN.

THE following attempts to translate from the original Arabic a few chapters of the Koran were jotted down by the writer after perusing the interesting article by Professor Warren in last November's impression of *The Open Court*.

The music of the Arabs, as perhaps of most other conservative peoples, appears to be characterised, or greatly influenced, by the physiography of their several countries, to be, indeed, the rhythmic expression of the physical environment of the singer.

As the Highland celt on his pipes is influenced in his music by the swelling or fitful gusts of the wild Westerly gales or the low, wailing sigh of the wind across the bleak moors, so the Arab depicts in rhythm the abrupt, jagged precipices of his sterile deserts or the weary, wavy monotone of his arid plains, now on a needle-like pinnacle of sound, then hurtling down to the abysmal depths of the scale, now here, now there, like the desert gazelle in its bounds and flying leaps from boulder to crag.

To an ear accustomed only to the European system the effect is as chaotic and jarring, or as wearisome and monotonous, as the mountains and deserts of the Arab land its birth-place.

Thus it seems to the writer that the difficulties of translating so typical a work as the Koran into another tongue for the effective appreciation of peoples having essentially different concepts of musical cadence, are insuperable, and can only end in failure.

In translating a work which has claimed for it a supernatural origin, the text should be scrupulously adhered to, and the utmost endeavor made to obviate additions or change of reading, and where these appear necessary they should be notified. This I have done in italics; but for the reasons given above I have made no attempt to imitate the rhythmic cadence of the original.

THE OPEN COURT.

SURA I.

*In the name of the Merciful,
God, the Pitiful.*

Praise be to God, to the Lord of the Worlds.
The Merciful, Pitiful One,
King of the Day on which all men are judged,
We worship Thee, asking for aid.
Lead us in th' path of those guided aright,
The path of those pleasing to Thee.
Not in the path of those causing Thee wrath,
Nor those who are wand'ring astray.

SURA CX.

*In the name of the Merciful,
God, the Pitiful.*

When the help of God shall come,
And the Victory be won.
And mankind in troops ye see
Unto God's religion flee.
Then extol thy Lord in praise.
His forgiveness ask *always*,
He, His pardon never stays.

SURA CXI.

*In the name of the Merciful,
God, the Pitiful.*

Shall perish his hands. *Yea*, perish himself,
Abu Laheb, *calléd Father of Flames*.
Nor profit his wealth, nor profit his pelf.
He shall be burned in a Furnace of Flames.
His wife too shall carry the wood *on her arm*,
Bound round her neck with a rope from the palm.

SURA CXII.

*In the name of the Merciful,
God, the Pitiful.*

Say, God, He is One.
God is Eternal.
He neither begets, nor was begotten.
Nor is there with Him any to liken.

SURA CXIII.

*In the name of the Merciful,
God, the Pitiful.*

Say, To the Lord of Dawning Day, for refuge do I flee,
From evil that hath been created *and may fall on me*.
And from the harm of dark'ning night when *I o'ershadowed be*

And from the ill of women blowing on the magic knot,
And from the hurt of envier when envying *my lot*.

SURA CXIV.

*In the name of the Merciful,
God, the Pitiful.*

Say, To the Lord of all mankind, for refuge do I fly.
The King of Men,
The God of Men.
From that withdrawing whisperer, who in mens' hearts doth lie
From Jinn and Men.

GOSPEL PARALLELS FROM PÂLI TEXTS.¹

Translated from the Originals by ALBERT J. EDMUNDS.

(Third Series).

PSYCHICAL POWERS.

Numerical Collection, iii. 60 (not before translated). Compare also Middling Collection, Dialogue No. 6, translated in S. B. E. XI; Long Collection, Dialogue No. 11, translated in *Dialogues of the Buddha* (1899), each by Rhys Davids, and the former also into German by Neumann.

Mark Appendix XVI. 17, 18: And these signs shall follow them that believe: in my name shall they cast out demons; they shall speak with [new] tongues; they shall take up serpents, and if they drink any deadly thing, it shall in no wise hurt them; they shall lay hands on the sick, and they shall recover.

O Brâhman, there are these three miracles.² What three?—The miracle of psychical power, the miracle of mind-reading, and the miracle of education. What, O Brâhman, is the miracle of psychical power? In this case, O Brâhman, one enjoys in various ways a kind of psychical power: from being one he becomes multiform, from being multiform he becomes one; he appears and vanishes,³ he goes without hindrance to the further side of a wall or battlement or mountain, as if through air; he plunges into earth and emerges, as if in water; he walks on the water without dividing it,

¹At the end of our Second Series, published in April, 1900, "Mark iii. 2," was a misprint for Mark iii. 11.

²*Patihâriya* is the regular word for a display of magical power or jugglery, and is best rendered "miracle." The word *iddhi*, translated "psychical power," is more dignified. Burnouf renders it "puissance surnaturelle."

³Luke xxiv. 31, 36: And their eyes were opened, and they knew him; and he vanished out of their sight. . . . And as they spake these things, he himself stood in the midst of them.

John xx. 19, 26: When therefore it was evening, on that day, the first day of the week, and when the doors were shut where the disciples were, for fear of the Jews, Jesus came and stood in the midst, and saith unto them, Peace be unto you. . . .

And after eight days again his disciples were within, and Thomas with them, Jesus cometh, the doors being shut, and stood in the midst, and said, Peace be unto you.

as if on earth ;¹ like a bird on wing he travels through the air in the posture of meditation ; and yonder sun and moon, so magical, so mighty, he feels and touches with his hand ; while up to the world of God he reaches even in the body. This, O Brâhman, is called the miracle of psychical power.

And what, Brâhman, is the miracle of mind-reading ? In this case, O Brâhman, one reads minds by visible indication, and says : “Your mind is thus, your mind is so, your heart is so-and-so.” Even if he read much, it is always as he says, and not otherwise. Again, O Brâhman, one reads minds not by visible indication, but by hearing the voice of men, demons or angels, and then declaring the state of mind ; and even if he read much, he is always right. Nor alone by these means does he read, but he hears the sound of thought-vibrations from thinking and reflecting, and in this way comes to read the mind and heart. And, as before, he is always right. Then again, besides visible indication, voice and thought-vibration, one ascertains the trance-mind of a man absorbed in rapture beyond thought and beyond reflexion, by heart-to-heart perception, so that one can say : “From the determinate mental conformation of this friend, from the nature of his heart, he will think such and such a thought.” And as before, he is always right. This, O Brâhman, is called the miracle of mind-reading.

What, now, Brâhman, is the miracle of education ?

In this case, O Brâhman, one educates on this wise : “Think thus instead of so ; consider thus instead of thus. Renounce this ; train yourself in that, and abide therein.” This, O Brâhman, is called the miracle of education. And these are the three miracles.² Which of the three, think you, is the most excellent and most refined ?

Well, now, Gotamo, as to the miracle of psychical power, he who performs and experiences this has the benefit all to himself. This kind of miracle, Gotamo, appears to me a natural accompaniment of religion. And I think the same of the second, the miracle of mind-reading. But that last one, Gotamo, that miracle of education, appears to me the most excellent and most refined. Won-

¹ Mark vi. 48, and parallels (told of Christ) : And seeing them distressed in rowing, for the wind was contrary unto them, about the fourth watch of the night he cometh unto them, walking on the sea.

Matthew xiv. 29 (told of Peter) : And he said, come. And Peter went down from the boat, and walked upon the waters, to come to Jesus.

² In *Digha* No. 11, Gotamo says : “It is because I see the danger in miracles of psychical power and of mind-reading, that I detest, abhor and despise them.” In the uncanonical Sanskrit *Divyâvadâna*, he says that he commands his disciples not to work miracles, but to hide their good deeds and show their sins.

derful, O Gotamo, marvellous, O Gotamo, is this good saying of yours ; and we hold that you are endowed with all three of these miracles. Gotamo can indeed practise every one of the aforesaid psychical powers, from becoming multiform to reaching in the body unto the world of God. Gotamo can ascertain the trance-mind of a man absorbed in rapture beyond thought and beyond reflexion, by heart-to-heart perception, and can say from the determinate mental conformation and the nature of the heart what the thought will be. And Gotamo can educate by telling what to think and what to consider ; what to renounce, wherein to train oneself, and wherein to abide.

It is true, O Brâhman, that I have attained to all that you have said, and I will furthermore assert that I can do each of the three miracles in question.¹

But is there, Gotamo, a single other monk who is endowed with these miracles besides yourself ?

Brâhman, not only one, nor a hundred, nor two, three, four, or five hundred, but even more monks there are who are endowed with these miracles.

But, Gotamo, where do these monks now dwell ?

In this very Order, O Brâhman !

Excellent, O Gotamo ! this is excellent ! As one raises what had been thrown down, or reveals what has been hidden, or tells the way to him who has gone astray, or holds out a lamp in the darkness that those who have eyes may see the objects, just even so has the Doctrine been made clear by Gotamo in manifold exposition. And I, even I, take refuge in Gotamo, his Doctrine and his Order. May Gotamo receive, as a lay-disciple, from this day forth as long as life endures, me who have taken refuge [in him].

FURTHER PSYCHICAL POWERS.

Numerical Collection, Class XI. Quoted in *The Questions of King Milindo* (S. B. E. XXXV., p. 279). See also Jâtaka 169.

Luke x. 19 : Behold, I have given you authority to tread upon serpents and scorpions, and over all the power of the enemy : and nothing shall in any wise hurt you.

Mark Appendix (as above).

Eleven advantages, O monks, may be expected from the cultivation of Benevolence,—from practising it, developing, making it a vehicle and an aim, pursuing it, accumulating, and striving to

¹In this and similar cases the tedious repetitions of the original are condensed into the style of our Western rhetoric.

the height of its heart-deliverance. What are these eleven?—One sleeps in peace, and wakes in peace; he dreams no evil dream; he is dear unto mortals and immortals; the angels watch over him; fire, poison, sword, can harm him not; quickly his heart is calmed; the aspect of his countenance is serene; he meets death undismayed; and should he fail of the Highest, he is sure to go to the world of God.

DISPLAY OF PSYCHICAL POWER FORBIDDEN.

Cullavaggo V. 8. (translated in S. B. E. XX., p. 81).

Mark viii. 11, 12: And the Pharisees came forth, and began to question with him, seeking of him a sign from heaven, tempting him. And he sighed deeply in his spirit, and saith, Why doth this generation seek a sign? Verily I say unto you, There shall no sign be given unto this generation.

Ye are not, O monks, to display psychical power or miracle of superhuman kind before the laity. Whoever does so is guilty of a misdemeanor.

POWER OVER SERPENTS.

Cullavaggo V. 6. (Translated in S. B. E., XX., p. 75). See also Jātaka 203 Luke x. 19, as above. (Justin Martyr adds *centipedes*.)

Now at that season a certain monk died of the bite of a serpent. They told the matter to the Blessed One. . . . And he said: "Now surely that monk, O monks, did not diffuse his Benevolence toward the four royal breeds of serpents! Had he done so, he would not die of the bite of one."

(The reason why I capitalise *Benevolence* is because it is a technical term, and means literally and forcibly *willing what is good*. By a systematic practice of this love-meditation, or projection of affectionate thought-waves toward all creatures, Gotamo, as we have read in a former translation, became the Deity of a by-gone cycle.)

SAVED FROM HELL.

Long Collection, Dialogue No. 12. (Translated in Rhys Davids's *Dialogues of the Buddha*, 1899.)

John iii. 16, 17: For God so loved the world, that he gave his only begotten Son, that whosoever believeth on him should not perish, but have eternal life. For God sent not the Son into the world to judge the world; but that the world should be saved through him.

Jude 23: And some save, snatching them out of the fire; and on some have mercy with fear; hating even the garment spotted by the flesh.

Lohicca the Brâhman spake thus unto the Blessed One: "O Gotamo, just as if a man had caught another by the hair who was

falling over the precipice of hell, lifted him up, and set him safe upon firm land; just even so have I, who was falling over the precipice of hell, been lifted up and set safe upon firm land by Gotamo."

(Fausböll and Rhys Davids translate *bho Gotama!* by "venerable Gotama." I have translated *bho*, when standing alone, as "friend": one might have said "gentleman," in the low complimentary sense denounced by Tennyson. *Bho*, when coupled with a name, is a familiar address, equivalent to our calling a man Smith or Jones, without the "Mister." The Buddhists resented this arrogant familiarity on the part of the Brâhmans toward the Master, and nicknamed the entire priestly caste "Bho callers," in consequence. Gotamo was the Master's family or clan-name, answering to our Smith, etc.; and rightly to appreciate the snobbery of the Brâhmans, we must imagine them saying: "Shakespeare, I want to talk to you.")

CASTES LOST IN THE LORD.

Uđâna V. 5: Cullavaggo IX. 1. (Translated in S. B. E., XX., p. 304.)

Galatians iii. 28: There can be neither Jew nor Greek, there can be neither bond nor free, there can be no male and female; for ye all are one man in Christ Jesus.

Mark iii. 34, 35: And looking round on them which sat round about him, he saith, Behold, my mother and my brethren! For whosoever shall do the will of God, the same is my brother, and sister, and mother.

John xv. 14, 15: Ye are my friends, if ye do the things which I command you. No longer do I call you slaves; for the slave knoweth not what his lord doeth: but I have called you friends; for all things that I heard from my Father I have made known unto you.

Just, O monks, as the great rivers,—to wit: the Ganges, the Jamna, the Rapti, the Gogra, the Mâhi,—when they fall into the great ocean, renounce their former name and kind and are counted as the mighty sea: just even so, monks, do these four castes,—to wit: the Nobles, the Brâhmans, the Tradesfolk, and the Slaves,—when they have gone forth from domestic life into the homeless one, under the Doctrine and Discipline made public by the Tathâgata, renounce their former name and clan, to be numbered with the Sâkya philosophers.

THE SECOND COMING.

Long Collection, Dialogue No. 26.

(Translated from the King of Siam's edition, because not yet printed in Roman letters.)

John xiv. 26 : But the Comforter which is the Holy Ghost, whom the Father will send in my name, he shall teach you all things, and bring all things to your remembrance, whatsoever I have said unto you.

Revelation xx. 6 : Blessed and holy is he that hath part in the first resurrection : over these the second death hath no power ; but they shall be priests of God and of Christ, and shall reign with him a thousand years.

Monks, in the days of the men of eighty thousand years there will arise in the world a Buddha named Metteyyo (i. e., the Benevolent One ; Sanskrit, Maitreya), a Holy One,¹ a supremely Enlightened One, endowed with wisdom in conduct ; auspicious, knowing the universe ; an incomparable Charioteer of men who are tamed ; a Master of angels and Mortals, a Blessed Buddha ; even as I have now arisen in the world, a Buddha with these same qualities endowed. What he has realised by his own supernal knowledge he will publish to this universe, with its angels, its fiends, and its archangels, and to the race of philosophers and brahmins, princes and peoples ; even as I now, having all this knowledge, do publish the same unto the same. He will preach his religion, glorious in its origin, glorious at the climax, glorious at the goal, in the spirit and the letter. He will proclaim a religious life, wholly perfect, and thoroughly pure ; even as I now preach my religion and a like life do proclaim. He will keep up a society of monks numbering many thousand, even as I now keep up a society of monks numbering many hundred.

¹*Arhat*, and so always.

MISCELLANEOUS.

A NEW WORK ON COMTE.

No French philosopher of the present century has exercised so great an influence beyond the boundary of his country as Auguste Comte. His system met with its first success in England and Holland. John Stuart Mill, Spencer, George Lewes, George Eliot, and a considerable number of other English thinkers and authors were more or less largely inspired by it. The religion of humanity which it promulgated is represented even to-day by societies in England, (at the head of which stands Mr. Frederick Harrison), and in the Latin states of both Europe and South America there exist positivist societies which are more enthusiastic for Comte's religion than were any of his followers during his lifetime. Even in Germany, the influence of his philosophy has been felt. The scientific sociology of to-day has proceeded directly from it. Scientific psychology is also in some measure its product, while the theories of "psychological moment" and of the biological and sociological "environment" which have been so richly elaborated by such authors as Taine, were almost entirely due to his applications of the principles of Lamarck to the doctrines of Montesquieu. In fine, whatever may be the fate of Comte's system, it is certainly the expression of one of the most characteristic tendencies of the present century, and we are glad that we have at last a competent and adequate exposition of his dominant ideas from the pen of a critical and impartial historian, M. L. Lévy-Bruhl, of the *École des Sciences Politiques*, and of the University of Paris. This writer is neither an adherent nor an opponent of Comte's philosophy, and he has accordingly performed his task in the same unimpassioned and unpolemical manner as if he were writing of Aristotle or of Descartes.¹

M. Lévy-Bruhl regards philosophical systems not only as the creations of individual minds, but also as products of their times and countries. Comte's period was that immediately succeeding the French Revolution. The question of the day was that of "social reorganisation," which occupied the thoughts of nearly every French thinker, as Fouillée, Saint-Simon, Joseph DeMaistre, and which also gave the first impulse to the writers on socialism in Germany and other countries. "The nineteenth century," says Von Ranke, "is pre-eminently a century of reconstruction." The "critical" period had passed, the "organic" period had come. "Social reorganisation" was also the task to which Comte set himself, but he differed from the other reformers of his period in demanding that reasoned opinion should be the groundwork of reform, that rational philosophy should be the basis of so-

¹ *La philosophie d'Auguste Comte*, par L. Lévy-Bruhl. Paris: Félix Alcan, 108 Boulevard Saint-Germain. 1900. Pages, 417. Price, 7 francs 50.

ciology and ethics. Every new project was in vain, he contended, unless founded upon some such general system of opinions and convictions as were the Catholic dogmas of the Middle Ages. Comte began, therefore, as a philosopher. He, too, desired to found a social, a "political" system, but it was to be primarily scientific, that is, "positive," and it was to repose on an ethics and a philosophy likewise "positive." From the first his life was but the methodical execution of this plan. M. Lévy-Bruhl sees no break of continuity in its development, as some writers have since. To him, Comte's career, said at the beginning to have been that of an Aristotle and at the end that of a Saint Paul, answered perfectly to the beautiful definition given in reply to the question: *Qu'est-ce qu'une grande vie? Une pensée de la jeunesse, exécutée par l'âge mûr.* The positive *philosophy* thus was merely preparatory to the positive *religion*, was its "indispensable preamble." That preamble, of researches in mathematics, astronomy and the physical sciences, the natural sciences, biology, psychology, and sociology, lasted twenty-eight years. When the crowning work came, the old generation had passed away, and the new turned a deaf ear to his supplications. The religion of humanity has now virtually met the fate that all similar systems have. The thought of Comte's youth and of his maturity alone remains; the dream of his old age has melted away, leaving but a few racks behind. To Comte's philosophy and science, therefore, M. Lévy-Bruhl devotes his book, not to his religion, and of the former, the reader may be assured that he will find here a faithful picture.

T. J. McC.

CORRESPONDENCE ON CHINA BY A CHINAMAN.¹

To the Editor of The Open Court:

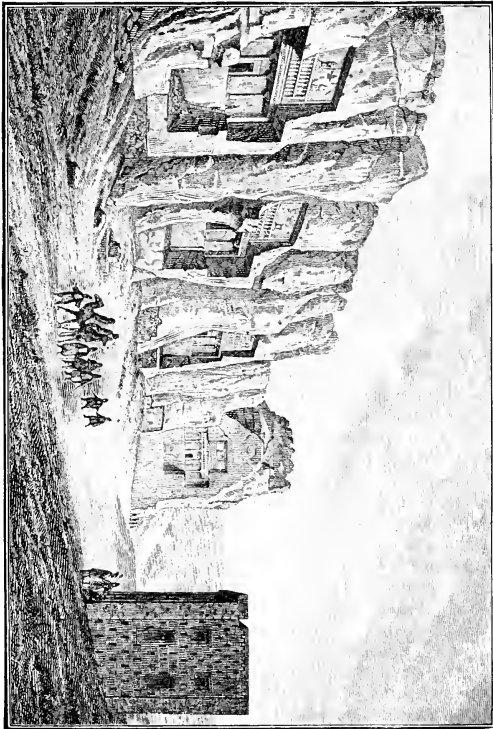
At present we are in the midst of an intellectual revolution. Owing to the efforts of reformers like K'ang Yue Wei and Liang Chi Ch'ao, the whole literary classes of China are at last aroused from their former stupor and lethargy, and we may hope to see some tangible results in the near future. The object of the Reform party is at present the restoration of the legitimate Emperor to power, and they believe that when this is accomplished an era of reform and progress will be duly inaugurated. They are at last appealing to the national spirit in the race and must therefore succeed ultimately. Practically, however, they have not accomplished much beyond frightening the Empress Dowager into withdrawing her decree for establishing a new reign with the advent of the current year. This is, however, a great deal to any one who understands Chinese institutions and the autocratic self-will of the Empress Dowager. K'ang is now a refugee here, like Voltaire on the shores of Lake Lemman, thundering against Mandarin corruption, oppression, and ignorance. For this reason the reward offered for his head is now Tls. 140,000. To my mind, however, his reform schemes appear too revolutionary and unpractical. Contrary to Confucius, he is striving after the distant and the high instead of the near and the lowly. When he had the Emperor's ear, if instead of abolishing certain old established departments he had advised the abolition of such an obnoxious custom as the "Kowtow"; if instead of recommending the confiscation of all temples throughout the Empire for use as schools, he had contented himself with the founding of a single really useful educational institution; if instead of creating a new fleet and building railways, he had interested himself

¹The author of this letter is a scholar who is exceptionally well versed in Western civilization. Not having permission to use his name, we omit his signature.

in the restoration of a single roadway in Peking, he would have earned for himself the respect and gratitude of all. His mistakes, however, were due to his past education. Nevertheless, his influence over the literati in China and elsewhere could not be disputed, and for such practical measures as above indicated we must look to some other Peter the Great or perhaps Napoleon.

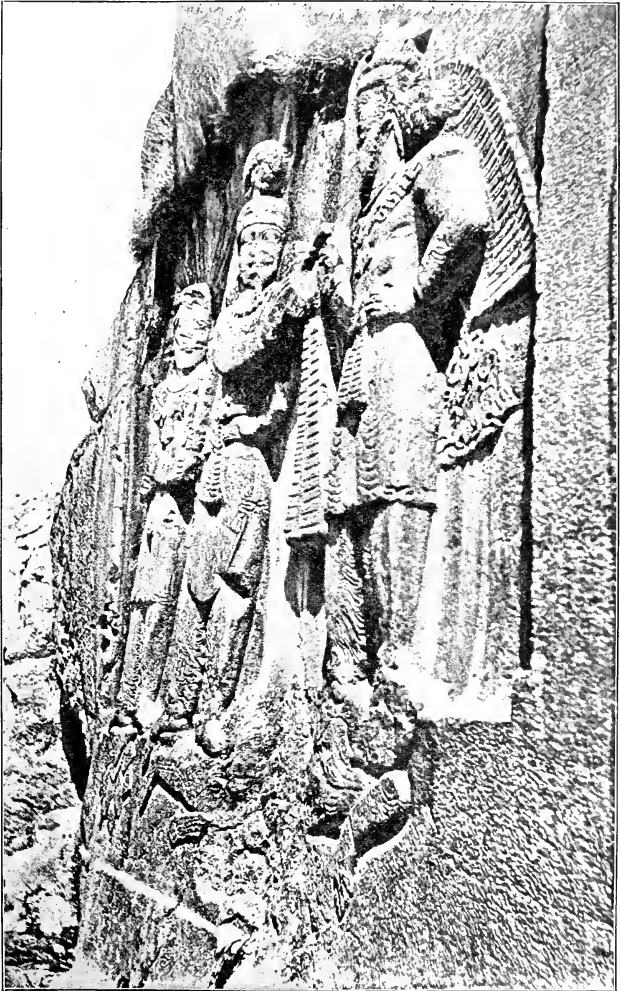
ZARATHUSHTRA.

Professor A. V. Williams Jackson, the Zend-Avesta Scholar of Columbia University, New York, published in the January number of the *Cosmopolitan* an in-



TOMBS OF ANCIENT PERSIAN SOVEREIGNS.

teresting illustrated article on Zarathushtra or Zoroaster, the prophet of Iran, born about 660 B. C. The canonical gospels tell us of the three Magi who came from the East to worship Christ and an apocryphal gospel adds the statement that they



TAKHT-I BOSTÂN SCULPTURE.

The figure supposed to be Zarathushtra is the third figure in the row. It stands on a plant-like pedestal and the head is surrounded by a halo of rays,

came in compliance with a prophecy of Zoroaster. We quote the following passage which is a condensed statement of Zoroaster's life:

"Tradition says that Zoroaster retired from the world when he came of age and that he lived for some years upon a remote mountain in the silence of the forest



IDEALISED PORTRAIT FROM A SCULPTURE SUPPOSED TO REPRESENT ZARATHUSHTRA.

(From Karaka's *History of the Parsees.*)

or taking shelter in a lonely cave. It was the solemn stillness of such surroundings that lifted him into direct communion with God. A divine vision is accorded him on the occasion, apparently, of some religious conference; and at the age of thirty,

after leaving the Iranian Sinai, he is prepared to teach a new law. "Righteousness is the best good"—"Ashem vohū vahishtem astī"—is his watchword; but he finds little fruitful soil for his theme. Over the land of Iran he wanders; through the territory of the modern Afghanistan he turns, and for a time he actually tarries in the country of Turan. But it is to deaf ears that he preaches, and his inspiration seems almost destined to have been in vain.

"The rulers harden their hearts before the newly-inspired prophet; the people fail to accept the message of the god Ahura Mazda. And yet Ahura Mazda, or Ormazd, is the "Lord Wisdom, the Sovereign Knowledge."

"For ten years, dervishlike he is a wanderer. This we know also from the tone of dejection which still echoes in some of the *Zoroastrian Psalms*. In his peregrinations he appears to have found his way once more to the region of the Caspian Sea. The darkness of these sad years is illumined, however, by visions which help to make strong his faith and to give form to his religious system and creed. Seven times are the mysteries of heaven revealed to his transported soul. He converses not alone with Ormazd, but he is also privileged to interview the Archangels of Good Thought, Best Righteousness, Wished-for Kingdom, Holy Harmony (guardian spirit of the earth), Saving Health and Immortality. Such are the names of the Persian hierarchy of *Amshaspands*; and these allegorical figures or personified abstractions stand in waiting about the throne of Ahura Mazda with a company of attendant angels. From these divine beings, Zarathushtra receives commands and injunctions which he is to convey to mankind. They inculcate the doctrine of purity of body as well as of soul; they enjoin the care of useful animals, especially the cow and the dog; they emphasise the necessity of keeping the earth, the fire and the water undefiled; and from several of their ordinances we can see that Zoroaster was a civil reformer as well as a spiritual guide. Foremost among the commandments is the abhorrence of falsehood, the universal obligation to speak the truth. This is one of the most fundamental of the ethical tenets that lie at the basis of the entire ancient Persian religious system. A revelation of the future is also vouchsafed to the soul of the Prophet during his sojourn in the celestial council; but one of the most precious boons which it is the privilege of his enrapt spirit to receive in these moments of ecstasy is a premonition of the resurrection and of the future life. Unlike the Mohammedan visions of ethereal bliss, there is no jarring note of pleasures of a physical kind to mar the harmony and spirituality of this glimpse into the world beyond the present.

"But before the ecstatic Messenger is allowed to return to the world of material things, one word of warning is given to guard him against the guile and deceit of the Spiritual Enemy, Angra Mainyu or Ahriman, as the devil is called. At this moment, then, as he turns from the dazzling splendor of heaven, a glimpse of the darkness, filth, stench and torment of the "Worst World" is disclosed. There in the murky depths of hell, with mocking howls and ribald jeers, huddle together and cover the vile crew of the archfiends and whole legions of demons, or "devs," as they still are named in Persian.

"Nor is this caution any too timely, for at once upon the hallowed Seer's return to earth occurs the temptation by Ahriman. Like the wily Māra seeking to beguile the newly-enlightened Buddha, or the tempter Satan striving to betray the Savior of mankind, the maleficent Ahriman endeavors to cause the righteous Zarathushtra 'to renounce the good religion of worshippers of Mazda.' This moment is a crisis; it is one of the turning-points in the history of the faith. The foul fiend is repulsed and vanquished and the victorious upholder of righteousness chants a

kind of Te Deum—'yatha ahu vairyo'—as a pæan of his triumph. His victory over Ahriman is complete, and it serves as the prelude to more full and perfect success, for Zoroaster, who has received the revelation and who has withstood all temptation, is now to achieve his crowning glory, the conversion of King Vishtâspa who becomes the Constantine of the faith."

Other scriptures of interest are the tombs of the Persian kings which show a representation of Ahura Mazda, a dignified man growing from a winged disk. This same emblem decorates the gable front of the Paroi temple of Atash Behram in Bombay.

THE HOME OF GOD.

BY PIERCE C. FREETH.

Where is the home of God ?
 Where may the God-seeker find Him ?
 Here in my transient soul ?
 There in that purple mountain ?
 Is His throne in a twinkling star ?
 Looks He forth from the sombrous
 moon ?
 Are His great thoughts hid by the deep
 sea crests ?
 Or burn they deep in our human breasts ?
 Will He breathe an Apocalypse soon ?

 Do ye not know ?
 God dwells where dwells perfection.
 In the eye of a child
 There is His Holy of Holies ;
 In the heart of a seer,
 In the grip of a man of action.
 God guides the hand of the ploughman,
 But His is the ripened harvest.
 Where beats the heart in endeavor God
 hovers ;
 In the deed well done God's presence
 feel ;
 Wrought Performance, ah ! that is God.
 God is Silent. Voice of Thunder
 The impact of the clouds hastening to
 escape
 His swift quickening spirit.
 All the puissant forces of the earth and
 Sky and Sea
 Are silent : and are God.
 Each potent spark is dynamic of God ;
 Each life light ray is emanant from God
 And doth our hearts illuminate if we
 perceive.

Perception : that is God !
 If ye would know Him
 Flee to the outer space
 Observe the simplest flower
 Obtruding from the clay and cumbering
 herbage
 Standing for a sign to man ;
 God seeded it, and watered it,
 The daisy lifteth up itself
 And for one day is God.
 Pierce to the depths where the fern
 fronds are aworship,
 There find God.
 In the still lake, in clear bush-hidden
 streams,
 God's spirit flows.
 Not in the crowd you'll find Him ;
 He hateth noisy rabblings ;
 But see ye on the verge,
 One stern and thoughtful face, commun-
 ing inwardly,
 Then look for God ;
 Or some poor trull with eyes ayeearn for
 Pity
 And God is nary.
 He flees the ranter, and those that pray
 With foaming emphasis,
 And squirm, and crawl, already rotting
 for the sod ;
 These be imperfect worms, whom to
 perfect
 Would not advantage him ;
 But Daisy uprightness, rigidity of Rock
 In purpose manful, which is Godful,
 Doth so delight Him
 That if it were possible to breed a race
 of men

There were no need for a millennium
 For it were here.
 God is in all performance
 Every day he guides the hand of genius
 To the master stroke, holding it there
 As Master Genius.
 To praise a hero is to raise a psalm to
 God,
 The Heroes' Hero.
 Then see with what simplicity divine
 He holds the reins which guide a mass
 of waving systems !
 See how the rents of Friction are re-
 paired,
 Not by a miracle, but by amelioration of
 the years,
 A lesson, surely, here for us to hasten
 slowly
 To our sure Goal of God.
 God is a Simpleton : See how very loth
 He is
 To obtrude the merest details of His
 Great Design ;
 Thus it is, that as like like begets
 The ploughboy loutish, likewise Simple-
 ton,
 Hath often a more inner view of God's
 Great Concept
 Than your pragmatic doctrinaire and all
 His thoughtless thousand congregation.
 God is a spirit ; worship Him in Spirit
 and in Truth
 But more than all in Deed.

 Where is God not ?—
 See that storm-blasted pine
 With rotten outwardness presaging rot-
 ten innerness ?
 There God is not.
 See that dead fruit clinging to withering
 stalks ?
 There God is not.
 Where life is not, there God is not.
 The heating fire of High Desire is God.
 When He departs Desire vanisheth
 Leaving to rearward everywhere traces
 of Death,
 Paralysis, stagnation, and the pall of
 Doom.
 The stricken doe feels God depart
 And lays her down and dies.
 The instinct of the brute we say :
 Vanish instinct vanish God.
 So it is with all creation ;
 So it is with that frail genius yclept man
 Which arrogates unto itself superiority
 Because together with its fairer attrib-
 utes
 It wags, or so it thinks,
 A far more facile and a better reasoned
 speech
 Than all surrounding heterogeneity.
 But is it so ?
 God knows, and he alone can know
 Whose dialect is spoken of the Universe
 If man is not a more imperfect beast,
 Vegetable, bird, or whatever thing he is
 Than half the other dwellers of the
 sphere.
 Once in a hundred years God sends a
 Man—
 Or so it seems to us purblindings—
 Who, when he soars, we shoot
 With critic shafts and hypercritic malices
 unto the death ;
 Then gather round the bier and scream
 apotheosis.
 There God is not.
 He one time sent a strange imperfect
 Christ
 Whose strength was weakness : See how
 Jesus died !
 And other would-be Christs have risen,
 and gone down
 In silent might ; their names enwrought
 With blood and fire in the tablets of the
 ages.
 Look what small God-like Wisdom rules
 this man !
 Look how hypocrisy, cunning, all the
 vices
 Leap up and grin upon his party gov-
 ernment !
 What wonder then that at first sound
 Of such contemptuous strife
 If God the Simpleton, ashamed of his
 handiwork,
 Shakes free the clogging dust, and flees
 these whited sepulchres !
 There God is not.

God wants not worship from the wilted soul.	Then strip your robes conventional shed thy halt creed
See how His wand of Doom Touches the prostrate seedling.	And stand out naked for the Truth.
See what a poor, warped, weakly thing it is	Fear no man but Thyself; no teaching brook
Which flings upon its knees in selfish fear	But that of thine own heart, God's alma mater.
And wastes a precious lifetime crying mercy!	Be not less pure than mountain stream Nor less erect than mountain birch,
See how the Creeds at pulpiterial beck Bow down to gods of wood, and stone, and stained glass	Pierce through the clouds like mountain peak,
And spill the filthy grease of beasts On wastrel altars; whilst hunger damned	Shed out sweet fragrance like the flower Reflect the radiance of the Sun,
In soul, not less than flesh, perish their fellows!	Be silent, steadfast as the Rock, But, birdlike, when the chance presents
There God is not.	Pierce the empyrean with thy voice.
.	Impart thy favors as the dew, Which tips the flowers then quick re- solves
Would ye put on the Godly attributes, and death defy?	Into its native atmosphere;
Nay, would ye God be in yourselves?	Then quick take introspective glance, Find thine own Heart the Home of God

IN GHOSTLY JAPAN.¹

A valuable contribution to the literature on Japan and things Japanese has recently come from the fascinating pen of Prof. Lafcadio Hearn, of Tokyo Imperial University. His name and his several former works are all well known to American readers who take an interest in these subjects. By his gifted literary talent and assimilative imagination, he has rightly won the admiration and sympathy of the reader, both at home and abroad. Many works describing the inner and outer life in Japan have been written, but most of them seem to me to have failed of accomplishing their aim. Mr. Koizumi Yakumo, which is the Japanese name of the author of the present book, enjoying free and long intercourse with the natives and above all being endowed with intensity of imagination and keenness of analytic powers, has deeply penetrated into the atmosphere which surrounds and permeates Japanese life and thought.

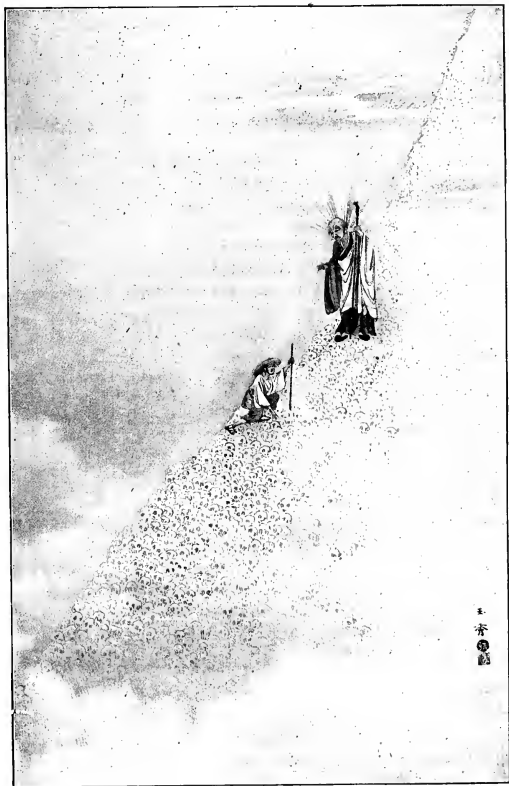
In the present work he tries to depict the beliefs and superstitions of the people as derived from popular Buddhism. The book starts with a scene on the "Mountain of Skulls," of which we reproduce the illustration. The opening is ghostly enough, but the legend is thoughtful. It describes the vision of a searcher for truth. A pilgrim follows the voice of Bodhisattva, yet finds himself to his horror climbing a mountain of skulls. Bodhisattva encourages the wanderer, saying: "Do not fear, my son! Only the strong of heart can win to the place of the vision." The significance of the dream is explained as follows:

"A mountain of skulls it is; but know, my son, that all of them are your own! Each has at some time been the nest of your dreams and delusions and desires.

¹ *In Ghostly Japan*. Illustrated. By Lafcadio Hearn. Boston: Little, Brown, & Co. 1899. Pp., 241. Price, \$2.00.

Not even one of them is the skull of any other being. All—all without exception—have been yours, in the billions of your former lives."

The author's method is varied. He narrates, describes, moralises, philosophises, becomes absorbed in reverie, and concludes with a reflexion on human life as the music of the gods,—the thought suggested on the sea-shore at the time of



THE MOUNTAIN OF SKULLS. (From *In Ghostly Japan*.)

the Bon or Festival of the Dead. The collection of Buddhist Proverbs will be of special interest to many readers, and omitting the original Japanese which is added throughout by Mr. Hearn, we quote the following wise saws:

"All evil done clings to the person.

Better to shave the heart than to shave the head.

Meeting is only the beginning of separation.
 Even a common man by obtaining knowledge becomes a Buddha.
 All lust is grief.
 Out of karma-relation even the divine nature itself grows.
 Like monkeys trying to snatch the moon's reflexion on water.
 The priest who preaches foul doctrine shall be reborn as a fungus.
 The future life is the all-important thing.
 Like a lot of blind men feeling a great elephant.
 The task of the priest is to save mankind.
 Even the Buddha was originally but a common man.
 Even to become a Buddha one must first become a novice.
 One blind man leads many blind men.
 Life is a lamp-flame before a wind.
 Even a worm an inch long has a soul half an inch long.
 Hell and Heaven are in the hearts of men.
 Even Hell itself is a dwelling-place.
 Even in Hell old acquaintances are welcome.
 Never let go the reins of the wild colt of the heart.
 The body is tortured only by the demon of the heart.
 Be the teacher of your heart: do not allow your heart to become your teacher
 This world is only a resting-place.
 The mouth is the front-gate of all misfortune.
 Nothing will grow, if the seed be not sown.
 Having waxed, it wanes.
 In even a cat the Buddha-nature exists.
 The time of sleep is Paradise.
 Even a devil is pretty at eighteen.
 Even a devil, when you become accustomed to the sight of him, may prove a
 pleasant acquaintance.
 A devil takes a goblin to wife.
 With one hair of a woman you can tether even a great elephant.
 The karma of the parents is visited upon the child.
 The fallen blossom never returns to the branch.
 Pleasure is the seed of pain; pain is the seed of pleasure.
 Only by reason of having died does one enter into life.¹
 There is no miracle in true doctrine.
 Joy is the source of sorrow.
 So the insects of summer fly to the flame.
 Clay-Buddha's water-playing.²

So entertaining is the style of the book, and so diversified its topics, that in reading it we are reminded of a well-known Chinese style of comment on this kind of writing: "The author leads the reader to a wonderful land where one finds now a green sward, now a jungle, now a rugged mountain, now a murmuring brooklet,

¹ I never hear this singular proverb without being reminded of a sentence in Huxley's famous essay, *On the Physical Basis of Life*: "The living protoplasm not only ultimately dies and is resolved into its mineral and lifeless constituents, but is always dying, and, strange as the paradox may sound, *could not live unless it died.*"

² That is to say, "As dangerous as for a clay Buddha to play with water." Children often amuse themselves by making little Buddhist images of mud, which melt into shapelessness, of course, if placed in water.

here spring trees in full blossom, there a dreary winter scene, etc., etc., so that one has not really the time to respond to so many pleasant impressions."

T. SUZUKI.

AN ANCIENT SARCOPHAGOS.

Upon a tomb, a man and maiden fair,
His face the older, hers, in youth's clear glow,
Hand clasped in hand, together thus they stand
A picture speaking love for every land,
Perchance a stifled love like Angelo's :
An artist speaks in stone, a language true,
Heart answers heart and eye to eye replies,
When love is pure and high as heaven's blue sky.

FLORENCE PEORIA BONNEY.

ROME, November 1899.

SCIENTIA.

Under this title, the enterprising publishing house of Georges Carré and C. Naud, of Paris, has begun the issue of a unique and attractive series of memoirs on the scientific questions of the day. The idea of the series is not that of supplanting the special periodicals, which record the daily progress of science, but to supply philosophical and general expositions of recent discoveries and of the controlling ideas and vicissitudes of scientific evolution. It will enable every student of science to obtain brief but sound views of the work which is being carried on in neighboring branches as well as in his own. The editorship of the series is in the hands of well-known authorities, the physico-mathematical section being edited by MM. Appell, Cornu, d'Arsonval, Friedel, Lippmann, Moissan, Poincaré, and Potier all of whom are members of the Institute; and the biological section being edited by MM. Balbiani, Professor in the Collège de France, d'Arsonval, Filhol, Fouqué Gaudry, Guignard, Marey, and Milne-Edwards, also members of the Institute. Each of the little volumes, which are very tastefully bound in boards, comprises from 80 to 100 pages and costs 2 francs. Subscriptions to six volumes are 10 francs only. The following numbers have already appeared or are announced for immediate publication:

I. Physico-Mathematical Section: P. Appell, *Les mouvements de roulement en dynamique*; A. Cotton, *Le phénomène de Zeemann*; P. Freundler, *La stéréochimie*; A. Job, *Les terres rares*; G. Lippmann, *Détermination de l'Ohm*; Ch. Maurain, *Le magnétisme du fer*; H. Poincaré, *La théorie de Maxwell et les oscillations hertziennes*; Raveau, *Les nouveaux gaz*; Villard, *Les rayons cathodiques*; Wallerand, *Groupements cristallins; propriétés optiques*; H. Laurent, *L'Élimination*.

II. Biological Section: M. Arthus, *La coagulation du sang*; L. Bard, *La spécificité cellulaire*; M. Bertrand, *Mouvements orogéniques et déformations de l'écorce terrestre*; H. Bordier, *Les actions moléculaires dans l'organisme*; Courtade, *L'irritabilité dans la série animale*; Yves Delage, and A. Labbé, *La fécondation chez les animaux*; Fabre Domergue, *Le Cytotrophisme*; H. Frenkel, *Les fonctions rénales*; A. Gilbert and Carnot, *Les fonctions hépatiques*; Hallion, *Modifications du sang sous l'influence des solutions salines*; Hallion and Julia-

vasculaire des toxines microbiennes; F. Le Dantec, *La Sexualité*; A. Martel, *Spéléologie*; P. Mazé, *Évolution du carbone et de l'azote*; M. Mendelssohn, *Les réflexes*; Poirault, *La fécondation chez les végétaux*; B. Renault, *La houille*; H. Roger, *L'infection*; J. Thiroloix, *La fonction pancréatique*; A. Van Gehuchten, *La cellule nerveuse et la doctrine des neurones*; and J. Winter, *La matière minérale dans l'organisme*.

The timely character of these little books will be seen from the foregoing simple enumeration of their titles, and it only remains to be added that, so far as the subject permits, the treatment has been in each case popular and is intelligible even to the non-scientific reader.

T. J. McC.

AN INTERNATIONAL PRIMER-CYCLOPÆDIA.

The first two volumes of the *Temple Primers*, which are designed to form a complete and trustworthy primer-cyclopædia of modern knowledge, have just appeared. They are the first of "a series of small volumes of condensed information introductory to great subjects, written by leading authorities, adapted at once to the needs of the general public, and forming introductions to the special studies of scholars and students." The enterprise is international in its character. Mr Henry Bradley, joint-editor of the *New English Dictionary*, will write on *The Making of English*; Dr. Henry Sweet, the famous philologist, on *The History of Language*; Professor William Ramsay, F. R. S., the joint-discoverer of Argon, on *Modern Chemistry*; M. Gaston Paris, Member of the French Academy, on *Medieval French Literature*; Professor Villari, on *The Italian Renaissance*; etc., etc. The publishers have entered into close relationship with Messrs. Göschen, of Leipzig, whose excellent series of German primers has been mentioned at length in former numbers of *The Open Court*. The *Sammlung Göschen*, as it is called, has been very successful, and some of the numbers of this collection will be translated into English and incorporated in the Temple series. The subjects to be treated by German authors are: *The Human Frame and Laws of Health*, by Drs. Rebman and Seiler; *Plants, Their Structure and Life*, by Dr. Dennert; *Primitive Man*, by Dr. Hornes; *The Civilisation of the East*, by Dr. Hommell; *The Races of Mankind*, by Dr. M. Haberlandt; *Roman History*, by Dr. Koch; *Teutonic Mythology*, by Dr. Kaufman. The books will be illustrated with the necessary reproductions of diagrams and charts, and to judge from the two opening volumes of the series they will prove to be very attractive in form.

The *Introduction to Science*, which is the first number, by Alexander Hill M. D., contains portraits of Lord Lister, Lord Bacon, Lord Kelvin, Robert Boyle Charles Darwin, and Sir Charles Bell. Dr. Hill's book aims at giving "an account in popular language of the scientific problems which are most prominent at the present time, and attempts to portray the attitude of mind of those who are engaged in solving them." The first section of the little book is devoted to general discussions of the character of science and scientific inquiry, the relation of philosophy to science, the classification of the sciences, the history of science, and the method of science. The author, in our opinion, has hardly been as successful in his treatment of first principles as he has been in the statement of the present problems of science, which takes up the second section of the book and treats of the age of the earth, the ultimate constitution of matter, the origin of species, the cause of the coagulation of blood, the function of nerve-fibres and nerve-cells, and microphytology. There are many statements in his discussion of first principles to which

most students of the philosophy of science would take exception, and which seem to be the expression of a certain agnostic attitude of thought with respect to the boundaries of science and philosophy and of science and religion,—an attitude which for some years has been characteristic of the "pure scientist."

The second volume of the series is a *History of Politics*, by Edward Jenks, M. A., Reader in Law to the University of Oxford, and is a very able summary of the history of politics as actually embodied in the political institutions of history. The author aims to give "a brief account of what men have *done*, not of what they have *thought*, in that important branch of human activity which we call Politics, or the Art of Government." After an introduction on types of society, the author takes up: (1) Savage Society; (2) Patriarchal Society (discussing tribal organisation, agriculture and the clan, industry and the gild); and (3) Modern (Political) Society (discussing the state and feudalism, early political institutions, the state and property, the state and justice, the state and administration, and varieties of political society). A short bibliography concludes the work, the first page of which is adorned by a picture of Westminster Hall and the old Houses of Parliament.

The price of the little volumes is 40 cents each,—not so cheap as the Göschen series, but certainly very reasonable. The publishers are, in New York, the Macmillan Co.; and in London, J. M. Dent & Co. T. J. McC.

FRENCH SCIENCE AND PHILOSOPHY.

M. Félix Le Dantec, lecturer on embryology in the Sorbonne, is favorably known in scientific circles for his contributions to general biology and for his writings on the general chemical and physical theory of life. A new little book by him therefore, on the *Lamarckians and Darwinians, a Discussion of Some of the Theories of the Formation of Species*,¹ will be welcomed by students as furnishing a succinct and trustworthy résumé of the modern theory of development. Darwin did not render justice to the work of his great predecessor, Lamarck, nor have Darwin's disciples shown much greater appreciation for the merits of the French thinker. By way of reaction, therefore, there has been a recrudescence of Lamarckian doctrines in the last two decades, and noteworthy contributions to science have been the result. American inquirers especially have adopted, developed, and even exaggerated the Lamarckian points of view. Taking a reconciliatory stand, now, M. Le Dantec proposes to show that neither point of view is absolutely correct, and that the fault of the two schools lies in their extreme exclusiveness. Personally he is of the belief that the general laws of biology, as already established can be deduced *a priori* from a knowledge of the *elementary* properties of living bodies, and he accordingly begins with an exposition of these elementary properties with the idea of leading the reader by a series of *purely logical* deductions to a knowledge of the fundamental principles which Darwin and Lamarck deduced directly from the *observation of the higher creatures* of the animal scale. The biological problems considered by the author relate mainly to the foundations of species, to the heredity of acquired characters, to mimicry, and to the bio-chemical theory of heredity.

* * *

The important problem of memory is treated in a new book by Dr. Paul Sollier. (*Le Problème de la Mémoire; Essai de psycho-mécanique.* Par Dr. Paul

¹*Lamarckiens et Darwiniens, Discussion de quelques théories sur la formation des espèces* Par Félix Le Dantec. Paris: F. Alcan. 1899. Pages, 191. Price, 2 fr. 50.

Sollier. Paris: F. Alcan. 1900. Pages, 219. Price, 3 fr. 75.) The question of the nature of memory is a fundamental one in every philosophy, and from having been regarded formerly as a special and independent faculty of the soul, it has become in the light of modern research a property of living matter, and has been transferred thus from the domain of pure psychology to that of physiology. M. Sollier believes that we can go even farther and reduce psychical phenomena to the laws of physics by considering them as a special form of energy and by emphasising the *dynamic* associations in the mechanism of memory. He makes no claim to having formulated a mechanical theory of memory; he has merely attempted in his work, which he says is psycho-mechanical in character, to exhibit the *analogies* which exist between the different phenomena constituting an act of memory, and certain other phenomena which are purely physical in character and are produced by simple transformations of forces. More than establishing such an analogy, indeed, he could not expect to do.

* * *

The philosophy of laughter is attacked in a little book entitled *Le Rire: Essai sur la signification du comique*, by M. Henri Bergson, lecturer in the École Normale Supérieure (Paris: F. Alcan. 1900. Pages, 204. Price, 2 fr. 50). The reader will find numerous specimens of wit and humor collected in this work, with some attempt at methodical grouping and at exhibiting the artifices which humorists have unconsciously employed to produce laughter. Two dominant ideas characterise M. Bergson's theory: The first is that humor is the expression of the life of *human beings living in common*, and is always the result of a definite lack of adaptation of the individual to his social environment; the second is that the duty of the psychologist is to retrace the continuous thread of development along which one form of humor has been developed into another, rather than to crowd together into a single fixed definition the enormous variety of risible effects which we see produced in life. In performing this task, the author has emphasised the ever-wavering play of fancy and the association of ideas, and records his conviction that his theory is applicable to many problems of the philosophy of art.

* * *

M. Durand (de Gros) is a philosophical writer of considerable prominence in France, and a very recent work of his on Taxinomy, or the theory of classification, was received with many marks of approval by critics. His researches cover a long period of time, and are concerned with nearly every branch of theoretical biology, psychology, and metaphysics. In his newest publication (*Nouvelles recherches sur l'Esthétique et la Morale*. Paris: F. Alcan. 1900. Pages, 275. Price, 5 francs) he has attacked the problems of ethics and practical morality. The work was written some thirty years ago, but for various reasons remained unpublished. M. Durand (de Gros) now thinks the time ripe to give his reflexions to the public, and he has prefaced his meditations with some remarks upon the present need of a new analysis of ethical ideas and of a reconstruction of practical morality in France. He endeavors to discover the reasons for the present symptoms of decadence in his mother country, and discovers them in the non-adaptation of its religion to its needs. He believes that there is a *possibility* of regeneration in the case of any nation (witness, for instance, the Japanese), but he sees but one serious chance for the French to stem the current which is carrying them towards the abyss, and that sole chance is a truly broad and genuinely scientific solution of the religious problem, the moral problem, and the social problem. Neither Catholicism, Protestantism, nor positivism suffices for this end. The first is absolutely inept, the second

is self-contradictory in its attitude to modern science, and the third is too exclusively critical and negative. What is needed is a work of reconstruction, not of destruction, a work of theory and of technique, a work of study and of fruitful labor. That work must be based not upon eloquence or sentiment. We must cease to treat questions of philosophy in a literary and oratorical style, by mere phrases; but we must approach them with the same seriousness and application that every sensible man brings to bear upon his own private business and personal interests,—in fine, must treat these questions in the positive spirit, not in the positivistic spirit. M. Durand (de Gros) believes that he has laid the foundations for this task in the theoretical researches embodied in his book; he understands æsthetics in the Kantian sense of the general science of sensation, composed (1) of a psychological æsthetics, the science of the subjective causes of sensation; (2) of a physiological æsthetics, the science of the organic causes of sensation; and (3) a physical æsthetics, or the science of the objective causes of sensation. Upon this basis he develops a theory of objective æsthetics, a theory of pleasure and of utility, taking up in connexion with these subjects many detailed questions of practical morality, such as the conflict of duties, cases of conscience, etc.

* * *

We wish that space permitted us to make a longer notice of M. G. Vacher de Lapouge's work, *The Social Rôle of the Aryans*.¹ The book abounds in acute and common sense interpretations of the data of anthropology, and from a psychological point of view throws considerable light on the problems of race. The author begins by formulating or rather indicating his definition of the Aryan type, which is for him the dolichocephalic blond *Homo Europeus* of Linné, and it is important to note that he does not omit in his formulation to lay the greatest stress on intellectual and psychical characters. He discusses successively the problem of the origin of the Aryans, their prehistoric fortunes and their historical development, their psychology, sociology, and their future. He accounts for the varying destinies of the great national civilisations by the varying predominance of the Aryan race, attributing the former success of the Latin nations to the existence in them of a large majority of the dolichocephalic type, and their deterioration to the elimination of that type. His doctrine in this respect is a species of selectionism in which for example even ecclesiastical celibacy is a powerful factor in the elimination of brains and the power of initiative in Catholic countries. From the Middle Ages onward he discovers a steadily progressing inundation of the brachycephalic type in France, Spain, Italy, and Southern Germany. In France, it lost nine-tenths, and the best nine-tenths, of its area of habitation, until now but four-tenths of the population may be said to be of the purely Aryan stock. In Spain, the type was eliminated in the epoch of American discovery and through the influence of religious selection, until that country is to-day but the mere corpse of its former greatness, and affords the next natural booty of the great Aryan races after China and Turkey. The remarks upon the Jews, and their social rôle, are also not bad; the whole combining to make up a very interesting work.

* * *

Starting from the view that anthropology and not sociology furnishes the adequate basis for a philosophy of human life, Dr. Daniel Folkmar, who was formerly professor of social science in Western Michigan College, and lecturer on sociology

¹*L'Aryen, son rôle social. Cours Libre de Science politique.* Professé à l'Université de Montpellier. Par G. Vacher de Lapouge. Paris: Albert Fontemoing, éditeur, 4 Rue le Goff. 1899. Pages, 565. Price, 10 fr.

in the University of Chicago, publishes in French a treatise on philosophical anthropology.¹ He has invented the term "philosophical anthropology" as designating a wider field of study than that formerly appertaining to the science of sociology and as expressing his conviction that sociology embraces not only the investigation of social phenomena, but also the investigation of the phenomena of individual life, which is the domain of anthropology. He makes no further claim for his work than that of being an introduction to a philosophy, a collection of suggestions and hypotheses which may or may not form part of a future system; and he has given us to this end something similar in its general aims and methods to the recent work of Dr. Paul Topinard's *Science and Faith*.

* * *

It is possible to obtain a very good knowledge of the philosophy of Spinoza from a little book of M. Émile Ferrière entitled *La doctrine de Spinoza: Exposé et commentée à la lumière des faits scientifiques*. (Paris: F. Alcan. Pages, 357. Price, 3 fr. 50.) The geometrical and literary scaffolding with which Spinoza enveloped his ideas has been entirely removed, and the essence of his doctrine alone is exhibited to view. The author has added commentaries to the obscure passages, a synoptic table of the tenets of Spinoza's philosophy, and two appendices,—one on the connexion of Stoicism with Spinozism, and one on the origin and elementary composition of our ideas, which contains strictures on certain phases of Spinoza's method.

* * *

Prof. Max Müller has found a new and ardent disciple in M. Moncalm, who has just written a work on the origin of thought and language (*L'Origine de la pensée et de la parole*. Paris: F. Alcan. 1900. Pages, 316. Price, 5 francs). Taking as his basis the dicta of his master that language is the autobiography of the human mind, the Rubicon which no brute will dare to cross, he has given a very able digest of the linguistic, philosophical, and evolutionary theories of the great Oxford thinker, combining them with the results of Noiré and with the theories of Darwin.

T. J. McC.

THE OLD SOUTH WORK.

The history of "The Old South Work" of the Old South Meeting-house, Boston, Massachusetts, has been recently told in a brochure of twenty pages by Mr. Edwin D. Mead, who remarks that the extent of the obligation which America owes to Mary Hemenway, the founder of the Old South Work, for her devotion to the historical and political education of our young people is something which we are only now beginning to appreciate. "I do not think it is too much to say," says Mr. Mead, "that she has done more than any other single individual in the same time to promote popular interest in American history and to promote intelligent patriotism." She saved the Old South Meeting-house in Boston, and contributed \$100,000 toward the fund necessary to prevent its destruction; and having saved it, she determined that "it should not stand an idle monument, the tomb of the great ghosts, but a living temple of patriotism." Lecture courses on American history which are entirely free to young people have been instituted, and in each case are given by representative men. In order to make American history more interesting and more instinct with life, the *Old South Leaflets* are issued at a price just

¹*Leçons d'Anthropologie philosophique: ses applications à la morale positive*. Par Daniel Folkmar. Paris: Schleicher Frères, 15 Rue des Saints-Pères. 1900. Pages, 336. Price, 7 francs 50.

covering the cost (five cents a copy), and brought to the attention of teachers of history over the whole country. They are now more than one hundred in number and contain reprints of such documents as the Constitution, the Articles of Confederation, the Declaration of Independence, Washington's Farewell Address, the Magna Charta; Franklin's Plan of Union; Washington's and Lincoln's Inaugurals; the Emancipation Proclamation; the Bill of Rights; the Constitution of Switzerland; the Petition of Rights; the Scottish National Covenants; Strabo's Introduction to Geography; Marco Polo's Account of Japan and Java; Columbus's Letter Describing his First Voyage and Discovery; Tracts of John Cotton, Roger Williams, and Cotton Mather; Letters of Washington and Lafayette. The last issue is the Prolegomena to Grotius's great work *De Jure Belli et Pacis*, "On the Rights of War and Peace." These leaflets are fulfilling an invaluable office in the historical education of our young people; they bring students into first-hand instead of second-hand touch with history, and their circulation should be encouraged in every way. (Old South Meeting-house: Boston, Mass.)

THE ASSYRIAN MONUMENTS AND THE SERMONS OF ISAIAH.

The story of the Assyrian Monuments is excellently told by Dr. Max Kellner, Professor in the Episcopal Theological School of Cambridge, in a recently-published brochure entitled: *The Assyrian Monuments Illustrating the Sermons of Isaiah*. The mounds from which these monuments were taken were well known to Oriental travellers, but it was not until 1842 that the work of excavating was begun by Paul Émile Botta, the French consul at Mosul, a Turkish town on the river Tigris. M. Botta unearthed the remains of the palace of King Sargon, the great Assyrian monarch, and found the huge winged bull-deities which guarded the palace gates, walls covered with bas-reliefs of sieges and battles, of hunting and sacrificial scenes, of demons in conflict, and cherubic beings in adoration before the sacred tree, and upon or below almost all of them long inscriptions in the cuneiform characters. As Dr. Kellner says: "It was a find to electrify the world."

M. Botta was followed by the Englishman Layard, who exhumed the palaces of Ashurnasirpal, Shalmaneser II. and Esarhaddon, in the mound of Nimroud. Botta and Layard, the pioneers in the field of excavation, were followed by Georg Friedrich Grotefend and Sir Henry Creswicke Rawlinson, the pioneer decipherers, who furnished the key for the reading of the cuneiform writings. The great library of Ashurbanipal at Nineveh, a room fifty feet long and twelve feet wide, was found filled with a collection of clay books of marvellous extent, covering every branch of learning known at the time—mythology, folk-lore, astrology, astronomy, geography, grammar, diplomacy, civil and administrative law, history and theology; and what is more, these clay books contain records of the more ancient Babylonian history and copies of the literary treasures of even pre-Semitic times. It may be readily conceived that this vast literature has thrown a wonderful and much-needed light upon the pages of the Old Testament, which is not primarily a history of the Jewish people, but rather a book of devotion for the teaching of spiritual truth, and in which the historical material was selected with this particular end in view. The relations between Assyria and Israel-Judah were very close. The latter nation lay between the empire of the Euphrates and the empire of the Nile, and acted as a sort of "buffer" in the great struggle for supremacy between these two world empires.

Such was the state of things during the life-time of the statesman-prophet Isaiah, whose sermons are full of illusions suggesting the situation. But what the Judean prophet only hints at, the records of Assyrian history in the clay books recently exhumed give with detailed fulness, "bringing out the whole history into strong and impressive relief." It is this material that Dr. Kellner has gathered in the present pamphlet, in which he has given translations of such portions of the Assyrian inscriptions as bear upon Isaiah's sermons. The pamphlet is accompanied with suitable maps and with eighteen excellent half-tone reproductions of the monuments of the most important of the bas-relief inscriptions. (Boston: Damrell & Upham, Old Corner Bookstore. Price, paper, 50 cents.)

BOOK REVIEWS AND NOTES.

THE THEOLOGY OF CIVILIZATION. *Charles F. Dole*. New York: Thomas Y. Crowell & Company. 1899. Pages, xxiv, 256. Price, \$1.00.

This book is thoughtful, sincere, and suggestive. The author is convinced "that the world is good and not bad, that life is abundantly worth living, that man is marching the way of a great and beautiful destiny." Every man, he contends, carries with him a treasure of veritable religion. "Among all thoughtful men there is a belief, growing strong with years and experience, in the facts of a moral structure in the universe." And so society is shot through with religion. "There can be no sound political, social, or economical structure that does not rest on a religious foundation." The author regards it as an axiom "that just so far as religion has any value, it cannot fear the most searching and candid inquiry. How can any reality be hurt by men's questions? Do we fear the test of the assayer's retort for our gold ore? Do we shrink from the art critic's examination of a genuine masterpiece?" The author believes that the time for religious controversy is passed. "We have reached a point, through the labor of many thinkers, where we can now see the harmony of views that once seemed to be contradictory, and can therefore offer a broad and fresh interpretation, both ethical and uplifting, and more satisfactory to the conscience and to the intellect than any previous interpretation." In the struggle of the larger world where all religions and philosophies compete, the Christianity of the author's childhood seemed "to take on a grand, beautiful, and universal form, in which no element of sound thought, genuine feeling, or ennobling memory is left out. It is no longer exclusive of aught that has helped men in other forms of faith. It puts up no barriers against the devout Jew the honest Parsee, the friendly Buddhist or Confucian. If this is a growing world, it is not too much to expect that no form of Christianity since Jesus taught, and no form of theism since men began to think, could be so practical and workable as the new form which comes to us at the dawn of a new century—the inheritance of all the ages."

"What is the kind of thought out of which a noble civilisation may be constructed? This is what the world longs to know," says Mr. Dole. That thought must stand the characteristic test of truth in modern thought and reasoning, which he characterises in the following words: "How do we know a truth when we see it? We know it because it matches, fits, goes into the unity, 'makes sense.' To match and fit is to be true. But a lie fits nowhere; it separates, whereas truth binds. It is like the old story of Cain. There is no place where a lie can stay. The universe simply will not receive it. So with all the wrong things. They have

no dwelling-place. But the things right and true are fixed in the eternal structure of the world. Their patterns endure."

And in constructing our morals and religion we use precisely the same faculty as we do in constructing our science. "We have the same reason for trusting it in the one place as in the other. It is the same faculty by which the musician makes a harmony or detects discords, which, applied to moral conduct, pronounces one action wrong, that is, dissonant, or out of line, and another action right, fitting, or beautiful."

We wish that Mr. Dole could have carried his analysis farther on this last point, as also upon several others; he gives us rather intimations than reasonings; but this is the point of view of the practical moralist, and the sole aim of the book. There are good remarks on personality and egotism in the book. Its "theology" is that of Good Will; "no youth is educated till Good Will altogether possesses him." This is the supreme end. μκρκ.

Mr. Charles Morris has attempted in a little book just published by The Macmillan Company, of New York, and entitled *Man and His Ancestor*, "to present the subject of man's origin in a popular manner, to dwell on the various significant facts that have been discovered since Darwin's time, and to offer certain lines of evidence never before presented in this connexion, and which seem to add much strength to the general argument." The book is unillustrated, and seems to give a fair and unbiassed synopsis of the chief points of view of evolution. (Pages, vi 238. Price, \$1.25.)

The same company published last year a work having a similar purport for the lower animals, by Dr. James Weir, entitled *The Dawn of Reason*. The author has sought here to epitomise the research of animal psychology in a clear, simple and brief form, avoiding technicalities and eschewing metaphysics. He claims to have thoroughly sifted and elaborated his material and assures the reader that he may depend upon the absolute truth of the evidence presented. The chapters of the book are entitled: The Senses in the Lower Animals; Conscious Determination; Memory; The Emotions; Æstheticism; Parental Affection; Reason; Auxiliary Senses; Letisimulation. Dr. Weir believes that he can safely assert and successfully maintain that "mind in the lower animals is the same in kind as that of man; that, though instinct undoubtedly controls and directs many of the psychica and physical manifestations which are to be observed in the lower animals, intelligent ratiocination also performs an important rôle in the drama of their lives. (Pages, xiii. 234. Price, \$1.25.)

The Leeds & Biddle Co., of Philadelphia, are the publishers of a pleasing little book entitled *Bushido, The Soul of Japan, An exposition of Japanese thought* by Inazo Nitobé. "Bushido" is the Japanese name for chivalry, and means literally, precepts of knighthood. The author tells what these precepts were and how they still form the basis of the morals and religion of his countrymen. (Pages, 127. Price, \$1.00.)

The *Biological Lectures* delivered in the year 1898 at the Marine Laboratory of Wood's Holl, Mass., have been collected into a volume published by Ginn & Co., of Boston. The lectures are of too special a character to receive detailed notice here, but it may be said that they are of more than usual importance, and will be a valuable addition to the library of the student of life. Price, cloth, \$2.90.

Outlines of the History of Religion, by John K. Ingram, LL.D., is a synopsis of the views expressed in Vol. III. of the *Politique Positive* of Auguste Comte. Mr. Ingram has made no claim to originality. He believes thoroughly in the mission of positivism; it has been the support and solace of his life, and he believes that he will not have done his duty if he passes away, as he soon must do, without giving public expression to his conviction that it is the one thing needful for society. Having tried its efficacy on his own heart and life, he now wishes to render the religion of the great French philosopher accessible even to the busiest reader. (London: Adam and Charles Black. 1900. Pages, 162. Price, \$1.25.)

The *Annual Report for 1897* of the Board of Regents of the Smithsonian Institution has been issued. The most important part of this volume consists of the papers describing and illustrating collections in the United States Museum. The subjects of these articles are: "Recent Foraminifera;" "Pipes and Smoking Customs of the American Aborigines;" "The Man's Knife among the North American Indians;" "Arrowpoints, Spearheads and Knives of Prehistoric Times."

The present year is the three-hundredth anniversary of the burning at Rome of Giordano Bruno, the Italian philosopher of the Renaissance, and one of the most interesting figures in the history of thought. The appearance, therefore, of a little paper-bound book treating of Bruno's philosophy and ethics, by Gustav Louis, is timely. The volume is written in German and published by Emil Felber of Berlin. (Pp., 133. Price, 2 Marks.)

Mr. C. Th. Odhner has translated from the photo-lithographed copy of the Swedish MS., Emanuel Swedenborg's treatise *On Tremulation*, which was originally written toward the close of the year 1719 and was the first of Swedenborg's anatomical and physiological works. This is its first appearance in English. (Boston: Massachusetts New-Church Union, 16 Arlington St. 1899. Pages, xiii, 79. Price, 50 cents.)

According to the *Annual Report of the General Manager of Buddhist Schools in Ceylon for 1899*, the Buddhist educational movement in that island seems to be quite promising. The *Report* says they have now 134 schools under their own supervision with 60,598 boys and 4,892 girls. While the total amount of donations received in 1895 was estimated at Rs. 8,906, it has been increased this year even to more than twice that sum, viz., Rs. 20,721.70. The most serious obstacle they had to encounter hitherto has been overcome. Mr. Buultjens, the General Manager, says in his *Annual Report*:

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To raise funds for the furtherance of their educational work, they propose to hold a fancy bazaar at Colombo, on July 29, 1900. Agents in London, England, to whom donations can be sent are Messrs. C. W. Leadbeater and Jinarajadasa, 9 Sherborne Gardens, West Ealing.

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Mathematical Essays and Recreations. By *Hermann Schubert*, Professor of Mathematics in the Johanneum, Hamburg, Germany. Pages, 149. Cuts, 37. Price, Red Cloth, 75c (3s.) net.

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